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NAVAL POSTGRADUATE SCHOOL

MONTEREY, CALIFORNIA

THESIS

A COMPSTAT COUNTERTERRORISM STRATEGY TO PROTECT TRAIN AND SUBWAY SYSTEMS

by

Peter A. Winski

March 2008

Thesis Advisor:	David Brannan
Second Reader:	Lauren Wollman

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13. ABSTRACT (maximum 200 words)

Several successful terrorist attacks have occurred on train and subway systems around the world, and past attempts have been made to attack the New York City Subway System. It is clear that the train and subway systems within the United States remain a highly probable target of terrorist groups. Most systems are too porous and vast to protect every entrance and exit; even if this were possible, the physical screening of every passenger is just not feasible due to the volume of the passengers and fluid nature of the systems.

This thesis recommends applying a CompStat Counterterrorism strategy to this threat. It applies those same techniques that were successful in reducing crime in New York, as well as many other major cities, and adjusts them to counteract the threat of a terrorist attack on train and subway systems across the nation. This strategy takes a proven, realistic, and sustainable approach to the current threat, while allowing the systems to operate normally. This thesis does not portend to ensure absolute security, but applies the same successful crime-reducing strategy to the current threat of a terrorist attacks on train and subway systems.

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A COMPSTAT COUNTERTERRORISM STRATEGY TO PROTECT TRAIN AND SUBWAY SYSTEMS

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Submitted in partial fulfillment of the
requirements for the degree of

MASTER OF ARTS IN SECURITY STUDIES
(HOMELAND SECURITY AND DEFENSE)

from the

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ABSTRACT

Several successful terrorist attacks have occurred on train and subway systems around the world, and past attempts have been made to attack the New York City Subway System. It is clear that the train and subway systems within the United States remain a highly probable target of terrorist groups. Most systems are too porous and vast to protect every entrance and exit; even if this were possible, the physical screening of every passenger is just not feasible due to the volume of the passengers and fluid nature of the systems.

This thesis recommends applying a CompStat Counterterrorism strategy to this threat. It applies those same techniques that were successful in reducing crime in New York, as well as many other major cities, and adjusts them to counteract the threat of a terrorist attack on train and subway systems across the nation. This strategy takes a proven, realistic, and sustainable approach to the current threat, while allowing the systems to operate normally. This thesis does not portend to ensure absolute security, but applies the same successful crime-reducing strategy to the current threat of a terrorist attacks on train and subway systems.

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I. INTRODUCTION

A. BACKGROUND

Several successful terrorist attacks have been targeted at train and subway systems around the world. In addition, past attempts have been made to attack the New York City subway system. It is clear that the train and subway systems within the United States remain a highly probable target of terrorist groups such as Al Qaeda and their affiliated groups. Transportation security experts have noted, in the wake of the July 2005 attacks on the London transit system and Madrid bombings of March 2004, it is clear that Al Qaeda regards mass transit as a primary target.[1]

Numerous homeland security experts, such as the RAND Corporation, agree that the train and subway systems are highly likely targets of international terrorists:

> Recent attacks on passenger-rail systems around the world highlight the vulnerability of rail travel and the importance of rail security for these passengers. Even though there have been no successful attacks on rail systems in the United States recently, the FBI and local police departments have thwarted several planned attacks against the New York subway system alone. The use of passenger rail and the frequency with which terrorists target it call for a commitment to analyzing and improving rail security in the United States.[2]

Not only do analytical institutions believe the train and subway systems are targets, but also current homeland security leaders such as Dr. Richard Falkenrath, the Deputy Commissioner of Counterterrorism for the New York City Police Department:

> The most likely scenario, I believe, is an attack in the subway system with multiple, near-simultaneous satchel bombs. [3]

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[1] Charles Sahm, *Hard Won Lessons: Transit Security*, Safe Cities Project, March 2006, 3.

[2] Jeremy M. Wilson, Brian A. Jackson, Mel Eisman, Paul Steinberg, K. Jack Riley, "Securing America's Passenger-Rail Systems," RAND Corporation, December 7, 2007, http://www.rand.org/pubs/monographs/2007/RAND_MG705.pdf [accessed February 10, 2008].

[3] Dr. Richard A. Falkenrath, Deputy Commissioner for Counterterrorism, NYPD, Testimony before the Committee on Homeland Security, United States House of Representatives, March 6, 2007.

The Transportation Security Administration's Office of Intelligence reported in their February 29, 2008 Mass Transit System Threat Assessment that extremists remain intent on targeting the United States homeland and the volume of previous attacks and plots against the mass transit system demonstrates continued strong interest in targeting this sector. They also report that previous rail attacks could inspire terrorists to conduct similar attacks in the United States.[4]

Terrorists have already successfully targeted mass transportation systems around the world. The most prolific attacks have occurred in Madrid, London and Mumbai. In each of these attacks, multiple devices exploded at multiple locations.

On March 11, 2004, ten separate explosions went off on four commuter trains in Madrid, Spain. The attacks occurred between 7:39 a.m. and 7:54 a.m., killing 190 people and injuring over 1,400.[5]

On July 7, 2005, four separate explosions rocked London's underground train system and double-decker bus system. Three bombs exploded within fifty seconds of each other at 8:50 a.m., and the final blast occurred at 9:47 a.m. on a double decker bus. Fifty-two passengers were killed and over 700 injured. The four Muslim suicide bombers that perpetrated this attack were also killed, and it is believed that they were affiliated with Al Qaeda.[6]

Again on July 11, 2006, seven bombs exploded on the suburban rail system in Mumbai, India, killing 209 and injuring over 700. The blasts exploded over an eleven-minute timeframe and detonated between 6:24 p.m. and 6:35 p.m.. Reports indicated that these bombs were placed in the overhead luggage compartments and were not the work of suicide bombers. [7]

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[4] Jim Popkin, "Government warns of terror threat to trains," Deep Background NBC News Investigates, March 4, 2008. http://deepbackground.msnbc.msn.com/archive/2008/03/04/729103.aspx [accessed February 21, 2008].

[5] CNN website, http://www.cnn.com/SPECIALS/2004/madrid.bombing/index.html [accessed January 20, 2006].

[6] CNN website, http://www.cnn.com/SPECIALS/2005/london.bombing/ [accessed November 20, 2006].

[7] CNN website, http://edition.cnn.com/SPECIALS/2006/mumbai.bombing/ [accessed November 20, 2006].

Although terrorism on train and subway systems is a worldwide problem, practical constraints to focus on homeland security have led the author to tailor this thesis to train and subway systems in the United States. In particular, the main focus of this thesis will be on the New York City train and subway system, the largest metropolitan subway system in the United States; if it can be adequately protected, then the theory contained in this thesis could apply across the entire country's train and subway systems. The author is focusing on the New York City Subway System precisely because international terrorists are targeting it. Several plots have been uncovered within New York City:

• ***New York City, New York – July 31, 1997***

On July 31, 1997, New York City police officers successfully averted a potential nail-filled pipe bomb attack by two Palestinian immigrants on a Brooklyn subway station frequented by Orthodox Jews - Gazi Ibrahim Abu Mezer and Lafi Khalil.

• ***New York City, New York – 2003***

Ron Suskind, in his new book, *The One Percent Doctrine, Deep Inside America's Pursuit of Its Enemies Since 9/11*, reports that Al-Qaeda planned to release hydrogen cyanide in the New York subways in 2003. Forty-five days before the attacks, Ayman al-Zawahir, Osama bin-Laden's number two man, called off the attacks.

• ***New York City, New York – August 27, 2004***

On August 27, 2004, the eve of the Republican National Convention, Shahawar Matin Siraj and his co-conspirator James Elshafay were arrested for planning to attack the Herald Square subway station in New York City with bombs hidden in backpacks. [8]

[8] Democratic Staff of the Committee on Homeland Security, "Detour Ahead Critical Vulnerabilities in America's Rail and Mass Transit Security Programs," Congressional Report prepared by the Democratic Staff of the Committee on Homeland Security, 7.

Research has clearly exposed that the train and subway systems, particularly in New York City, are a target of International terrorists, such as Al Qaeda and other affiliated groups. Protecting the train and subway systems in New York and across the United States is a daunting and incredibly difficult task, as stated in the 9/11 Commission Report:

> Surface transportation systems such as railroads and mass transit remain hard to protect because they are so accessible and extensive[9]

The size of New York City's and the country's train and subway system's physical infrastructure and the incredible volume of passengers, as well as the fluid nature of the system, make it extremely difficult to fully protect.

For example, the New York City subway system has 468 stations and 660 miles of track, as well as hundreds of emergency exits and outside, elevated tracks.[10] Additionally, for a national perspective, Amtrak operates a nationwide system in forty-six states and has 21,000 miles of routes.[11]

The number of passengers who traverse the systems each day is millions more than commercial air travel. In New York City alone, over five million people a day use the subway system, adding up to a yearly total of 1.5 billion in 2006.[12] As reported in a RAND transportation study, as many people traverse New York City's Penn Station in a single weekday morning as travel through Chicago's O'Hare International Airport in about two and a half days.[13]

The fluid nature of the train and subway systems prevents passengers from being subject to extensive and prolonged security procedures. Unlike commercial airline

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[9] National Commission on Terrorist Attacks, *9/11 Commission Report*, 391.

[10] Metropolitan Transportation Authority website, http://www.mta.info/nyct/facts/ffsubway.htm [accessed November 15, 2006].

[11] Amtrak website, http://www.amtrak.com/servlet/ContentServer?pagename=Amtrak/am2Copy/Title_Image_Copy_Page&c=am2Copy&cid=1081442674300&ssid=542 [accessed February 10, 2008]

[12] NYPIRIG Straphangers Campaign, http://www.straphangers.org/diaries/ubbthreads.php/ubb/showflat/Number/406556/page/1 [accessed February 10, 2008].

[13] Wilson et al., "Securing America's Passenger-Rail Systems."

passengers who are subjected to lengthy security screenings, the rapid tempo of the passenger rail system makes this impractical. Transit Security experts have reported:

> Protecting mass transit from terrorism is an even more challenging task than protecting the nation's air traffic network. Unlike an airplane, a bus, subway, or commuter train is in a constant state of flux, with passengers boarding and departing from numerous entry and exit points; and transit facilities rely on open architecture and the rapid and easy movement of patrons. In addition, the sheer volume of riders also makes it impractical to subject users of mass transit to the same intensive screening that airline passengers undergo.[14]

It is painfully obvious that any strategy to protect the country's rail and subway systems must be complex and malleable. Even New York City, commonly recognized as a leader in homeland security initiatives, has no comprehensive, written strategy to address the threat of terrorism on the New York City Subway System. Instead, a series of programs and initiatives has developed over time, in an ad hoc manner. A comprehensive, written strategy is needed to ensure that everything realistically possible is being done to protect this portion of the transportation system, which has repeatedly been identified as being under threat. This strategic-level research should then be used as a model for the development of plans for other large metropolitan cities across the nation.

Terrorism is a complex problem. It is often a political or religious concept about using power and violence to influence change.[15] Violent crime, such as homicide and rape, is also a complex problem that is not usually caused by a single difficulty; frequently, it is caused by several societal factors such as poverty, family structure and the environment.[16] They both consist of using power and violence to achieve the outcome they desire. For example, a suicide bomber who walks into a crowd and detonates himself is, in fact, killing those victims around him. Although this action would be described as terrorism, it is also a crime of murder. Homeland Security experts such as Dr. Kathleen Kiernan have stated:

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[14] Sahm, *Hard Won Lessons*," 3.

[15] Bruce Hoffman, *Inside Terrorism*, Columbia University Press, 2006, 2.

[16] "The Root Causes of Crime," CS&CPC Statement on the Root Causes of Crime, 1996, 2. http://www.preventingcrime.net/library/Causes_of_Crime.pdf [accessed February 21, 2008].

> Not all criminals are terrorists, but all terrorists are, in fact, criminals[17]

Other authors concur and relate terrorism to crime, such as Jean O'Neil:

> First and foremost, terrorism is a crime; it violates the law as much as any robbery or burglary or homicide. This fact helps make it amenable to the basic concepts of crime prevention.[18]

A clear terrorism-crime nexus can be exploited in the effort to combat terrorism. One of the leaders of the Madrid train attack, Jamal Ahmidan, was a common criminal, who was arrested for murder and drug dealing well before he became a terrorist.[19] In fact, he was able to use his criminal network connections to obtain the dynamite used in the attack.[20]

For years, Law Enforcement has effectively combated crime; therefore, some of the most successful crime-fighting strategies should be applied to fighting terrorism. Counterterrorism experts agree with this philosophy and have stated: Fighting terrorism effectively is more like police work than military combat[21]

The system the NYPD uses to combat crime is a complex one, commonly referred to as CompStat, or Computerized Statistics.[22] This crime-fighting strategy has helped to reduce crime to record levels and has made New York the safest large city in America.[23]

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[17] Kathleen Kiernan, "Tradecraft or Streetcraft?" *Crime and Justice International* 22, no. 93, July/August 2006, 29.

[18] Jean F. O'Neil, "Crime Prevention can Spur and Support Homeland Security in Neighborhoods and Communities," Topics in Crime Prevention, *National Crime Prevention Council*, Winter 2006, 1. http://www.ncpc.org/cms/cms-upload/ncpc/File/topics_cp_hs.pdf [accessed February 21, 2008]

[19] Andrea Elliot, "Where Boys Grow Up to Be Jihadis," New York Times Magazine, November 25, 2007 http://www.nytimes.com/2007/11/25/magazine/25tetouan-t.html?pagewanted=4&_r=1 [accessed March 7, 2008.

[20] Justin Webster, "The Madrid Connection," Documentary Film, October 2007 [viewed March 3, 2008].

[21] Clark McCauley, "War Versus Justice in Response to Terrorist Attacks," *Psychology of Terrorism*, Oxford, 2007, 61.

[22] Tom Steinert-Threlkeld, "CompStat: From Humble Beginnings," September 9, 2002 http://www.baselinemag.com/c/a/Past-News/CompStat-From-Humble-Beginnings/ [accessed February 17, 2008].

[23] Al Baker, "City is Doubling Police Program to Prevent Crime," *New York Times*, December 27, 2007, http://www.nytimes.com/2007/12/27/nyregion/27crime.html?pagewanted=2&_r=1 [accessed February 21, 2008].

In New York City, the NYPD's CompStat process revolutionized police work and reduced crime dramatically. CompStat originated in 1994 under the leadership of then NYC Police Commissioner William Bratton and his Deputy Commissioner of Operations, Jack Maple. While computerized statistics were used to measure crime, the main idea was a multi-layered strategy to reduce crime and then to hold the precinct commanders accountable for the crime in their area of responsibility. The CompStat strategy used to combat crime in New York City consists of four components: intelligence, detection, effective deployment, and relentless follow-up.

The main focus was on violent crimes, but they also concentrated on smaller crimes because they adhered to the theory that these quality-of-life issues contributed to larger, more serious crimes, commonly known as the "Broken Windows" theory.[24]

Precinct commanders monitor the crime in their precincts by mapping out the time, place and type of crime so they know where and when to apply their resources. They have the responsibility to analyze who committed the crime, when it occurred, how it was committed and, most importantly, what can be done to stop it.

By applying this strategy to the problem of terrorism, in particular to the potential for terrorist attacks against the nation's train and subway system, this threat can be reduced to a manageable level. Heather MacDonald, who works for the Manhattan Institute, agrees and has written that "anti-terrorism efforts should be CompStated."[25]

The Compstat model has spread across the nation and has been successful in reducing crime in many large cities and towns.[26] It is a conclusion that a comprehensive CompStat counterterrorism strategy to protect the train and subway systems will follow suit and spread across the country.

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[24] Dennis C. Smith and William J. Bratton, "Performance Management in New York City: Compstat and the Revolution in Police Management," 459. https://www.hsdl.org/homesec/docs/legis/nps03-011404-12.pdf&code=875cea905b4c13a5e58d3e3b8daf57a1 [accessed February 20, 2008].

[25] Heather MacDonald, "Keeping New York Safe for Terrorists," *The City Journal*, Autumn 2001, http://www.homelandsecurity.org/journal/articles/HeatherMacDonald.htm [accessed March 5, 2008.

[26] Shaila K. Dewan, "New York's Gospel of Policing by Data Spreads Across U.S." *New York Times*, April 28, 2004 http://query.nytimes.com/gst/fullpage.html?res=9507E6D61E3AF93BA15757C0A9629C8B63 [accessed February 17, 2008].

The first step in this strategy is to have a robust local intelligence system in place in order to adequately examine the threat that a municipality is facing. This local intelligence system cannot rely solely on federal resources to provide intelligence information; it must be innovative and collect information from sources all over the world to adequately examine the global threat it is facing. A municipality must also gather information locally to compensate for the homegrown threat.

Secondly, there must be a system of detection in place to identify potential terrorists. Detection in police work comes from a variety of sources such as victims, witnesses and video cameras. All of these sources and more, such as the train employees and passengers, must be leveraged when dealing with the possibility of terrorist attacks on the train and subway systems.

Additionally, there should be an aspect of deterring terrorism and apprehending terror suspects through effective deployment of available resources. Effective deployment of resources creates omnipresence in police work and can be adjusted to deal with the threat of terrorism. This can be a deterrent factor but can also be a means of apprehending suspects before or during an event.

Relentless follow-up is necessary to apprehend those responsible and to prevent future crimes. This same tactic can and must be applied to terrorism. It is not practical to think that all terrorist attacks can be prevented, but, once committed, those responsible must be apprehended before they can strike again. Research in this thesis has shown that relentless follow-up may have prevented additional attacks.

Finally, all of these aspects must work in conjunction with each other to reduce the possibility of an attack on a transportation system. Even then, unfortunately, there are no guarantees or absolutes in the age of terrorism. Therefore, any strategy to protect a train or subway system must include an effective evacuation plan in an effort to aid in the recovery from an attack. This is essential in preventing the terrorists from accomplishing their goals of causing carnage and fear.

Just as in the crime-fighting version of CompStat, someone needs to be accountable for the implementation and maintenance of the strategy in place. A "Precinct Commander" type of figure needs to be in charge of reducing terrorism on the train or subway system.

In the NYPD, the closest position is that of the Transit Bureau Counterterrorism Inspector. While this position is nominally charged with implanting the counterterrorism policies of the NYPD within the Transit Bureau, it is certainly not managed through the CompStat paradigm. Any successful Compstat strategy for reducing terrorism within the train and subway systems needs to have a central figure that has control of the resources involved and ensures that the strategy is being implemented properly.

B. RELEVANT LITERATURE

The relevant literature has been separated into categories to clearly identify the situation. Some documents focus on the general nature of the threat to train and subway systems. Others clearly identify the New York City Subway System as having been the target of past plots and attempts. Literature also points out the difficulty of protecting the train and subway systems. Additionally, documents describe the current New York City subway evacuation plan and discuss how to improve it.

Transportation security experts have described the threat to the train and subway systems as follows:

> In the wake of the July 2005 bombing of the London transit system and Madrid bombings of March 2004, it is clear that al Qaeda regards mass transit as a primary target [27]
>
> Extremists, however, remain intent on targeting the U.S. homeland. The volume of previous attacks and recent plotting against mass transit systems overseas demonstrates continued strong terrorist interest in targeting this sector. Previous rail attacks in Madrid (March 2004),

[27] Sahm, *Hard Won Lessons*," 3.

London (July 2005), and Mumbai (July 2006) could inspire terrorists to conduct similar attacks in the United States[28]

The review of the literature focused on the New York City Subway System since it is the largest in the United States and has been targeted by terrorists. It was examined to find the vulnerabilities and to identify any possible improvements. "The New York City Transit Agency is the largest subway system in this country (64 percent of one-way trips, 58 percent of passenger miles, and half of the passenger stations), with more than 6,000 scheduled trains per day carrying over 3 million passengers." [29]

Homeland security officials concur that the New York City Transit System is a target of terrorists, particularly since there have been at least three (3) documented incidents of terror plots. A congressional report prepared by the democratic staff of the Committee on Homeland Security reported:

- In July, 1997, New York City police officers successfully averted an attack on a Brooklyn subway station by two Palestinian terrorists.
- In 2003, Al-Qaeda planned to release hydrogen cyanide in the New York subways but, forty-five days before the attacks, Ayman al-Zawahir, Osama bin-Laden's number two man, called off the attacks.
- In August 2004, on the eve of the Republican National Convention, two men, Shahawar Matin Siraj and his co-conspirator James Elshafay were arrested for planning to attack the Herald Square subway station with bombs hidden in backpacks.[30]

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[28] "Mass Transit System Threat Assessment 29 February 2008," as reported by Jim Popkin, "Government warns of terror threat to trains," Deep Background NBC News Investigates, March 4, 2008. http://deepbackground.msnbc.msn.com/archive/2008/03/04/729103.aspx.

[29] Characteristics and Common Vulnerabilities Infrastructure Category: Subways, Risk Management Division, Office of Infrastructure Protection, U.S. Department of Homeland Security, Version: November 23, 2005, 2.

[30] Detour Ahead Critical Vulnerabilities in America's Rail and Mass Transit Security Programs, Congressional Report prepared by the Democratic Staff of the Committee on Homeland Security, 7.

While there is consensus that the New York City Subway System is a target, there is some debate in the literature on the best way to protect the lives of the passengers. The director of the Center for Policing Terrorism at the Manhattan Institute has stated rail systems require a completely different approach to security from the one used in aviation:

> Rail moves a lot more people than air does. It's designed to be an open system that can move a lot of people fast.[31]

Protecting the mass transit system in the United States is a daunting and incredibly difficult task as stated in the 9/11 Commission Report:

> Surface transportation systems such as railroads and mass transit remain hard to protect because they are so accessible and extensive[32]

Additionally, a Mineta Transportation Institute study of the United Kingdom's response to the IRA's campaign against their transportation system as well as the Tokyo Subway Sarin attack, concluded, "Indeed, no security measures can prevent terrorists from setting off bombs in public places."[33]

The New York City Police Department has implemented a series of programs aimed at protecting the city in general and some directed at the subway system in particular.

The broadest program is the "International Liaison Program," which assigns NYPD personnel overseas in a dozen different locations to gather intelligence and report directly back to the department, without any boundaries in between.[34] While this has caused some consternation at the federal level with the Department of State and the

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[31] Associated Press, "Amtrak to unveil new security measures including random bag screening," *International Herald Tribune*, February 18, 2008 http://www.iht.com/bin/printfriendly.php?id=10163174 [accessed February 18, 2008].

[32] National Commission on Terrorist Attacks, *9/11 Commission Report*, 391.

[33] Brian Jenkins and Larry Gersten, "Protecting Public Surface Transportation Against Terrorism and Serious Crime: Continuing Research on Best Security Practices," Mineta Transportation Institute, September 2001, 23.

[34] Sergeant Robert Ruggiero, NYPD Intelligence Division Personnel Officer, author interview, October 30, 2006.

Federal Bureau of Investigation, the NYPD has persevered, and these officers remain a valuable intelligence-gathering asset. New York City Police Commissioner Raymond Kelly has stated,

> We can't rely solely on other agencies to protect us here. So there's nothing like self help, and that's what we're doing.[35]

Other deployment programs such as "Atlas Teams" and "Hercules Teams" involve having groups of officers — some heavily armed emergency service officers — as well as intelligence-division detectives, respond to high-profile locations randomly in order to disrupt any pre-operational surveillance or stop an actual attack. This is complemented by the "Critical Response Vehicle" surge drills in which patrol officers from all of the NYPD precincts, police service areas and transit districts respond to pre-designated, high-profile locations, such as Times Square, stage a show of force, and then disperse to additional locations throughout the city to once again interrupt or deter an attack.[36]

The most directly related program to the subway system is the "Random Bag Check" program in which NYPD officers respond to some of the 468 subway stations[37] that have been pre-selected; they randomly search passengers' bags as they enter the system. Some have stated that with these programs "The NYPD, with its extensive counterterrorism division that monitors foreign news services and actually has officers stationed overseas, is widely recognized as the gold standard in this regard."[38]

Others have disputed the effectiveness of some of the NYPD's programs, such as James Metzger in his Naval Postgraduate School Thesis[39] where he states,

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[35] Ed Bradley interview for "60 Minutes," "Inside the NYPD's Anti-Terror Fight," http://www.cbsnews.com/stories/2006/03/17/60minutes/main1416824.shtml [accessed February 18, 2008].

[36] Deputy Chief Vincent Giordano, NYPD City Wide Counterterrorism Coordinator, author interview, November 20, 2007.

[37] Metropolitan Transportation Authority website.

[38] Sahm, Hard Won Lessons: Transit Security, 8.

[39] James Metzger, "Preventing Terrorist Bombings on United States Subway Systems," September 2006, Naval Postgraduate School Master's Thesis.

> The current method used by the New York City Police Department to randomly screen passengers on the New York Subway have not been proven effective.[40]

Instead, Mr. Metzger advocates utilizing the Behavior Observation Screening System (BOSS), which analyzes a person's behavior and documents, and then employs interview techniques to identify potential terrorists. While this system may work in the airline industry, and has "made El Al (Israeli Airline) the most secure in the world,"[41], it is not practical in the busiest subway system in the country. The number of people who travel on one particular airline, El Al, is miniscule compared to the millions who travel the subway and train systems each day. As reported in a RAND study, "By comparison, as many people traverse New York's Penn Station in a single morning as travel through Chicago's O'Hare International Airport in about two and a half days."[42]

The BOSS system is a valuable tool that when appropriately applied in a layered strategy can be very useful in identifying inappropriate or suspicious behavior, but cannot be relied upon solely in an extremely fast-paced and fluid environment such as in a train or subway system.

However the situation is viewed, the fact remains that the train and subway systems are a prime target for a terrorist attack, and are so porous that an attack is very difficult to prevent. Before going any further, it is important to explain why we should concentrate on a conventional attack on the subways more than any other threat. The RAND Passenger Rail Study reports, "Most of the threat to rail systems comes from bombings," and:

> The prevalence of explosive devices in past terrorist operations suggests that such attack modes will feature prominently in future threats to these systems. Timed explosive devices can provide a way for a terrorist organization to stage attacks while preserving its human capital; suicide operations using similar technologies and components provide an

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[40] James Metzger, "Preventing Terrorist Bombings," 19.

[41] Ibid., 23.

[42] Wilson et al., "Securing America's Passenger-Rail Systems."

> alternative strategy for groups to increase the potential effectiveness of such attacks at the cost of their group members.[43]

Some of the literature described the ways in which terrorist attacks were carried out. A 2005 Mineta Transportation Institute Case Study of Contemporary Terrorist Incidents reported, "Mostly, the perpetrators relied on some sort of delayed effect or timer so that the terrorists could escape."[44] This leaves valuable time in between potential explosions for passengers to escape. This precious time must be used wisely to evacuate the entire system as quickly as possible.

The literature addressing the issues thus far has been peripheral in nature, but important for framing the central arguments of this thesis. To further build the case for my strategically positioned but operationally robust proposal for security on New York's rails, we now turn to the essential documents of the NYPD responsible for outlining the current plans for security. It is important to note that there is no central authoritative document. Rather, a series of documents deal with individual issues related to protecting subway travel in New York. This failure to provide doctrinal oversight for the individual plans and procedures is important to note, and is an issue this thesis will address and correct.

The evacuation plan is a one-page document that confirms the aforementioned evacuation plan for the NYC Subway System. It relies upon the civilian employees of the Metropolitan Transit Authority, the train conductors, and motormen to pull the train into the next available station and self evacuate the trains upon notification from the central MTA headquarters.[45] It is unclear exactly how the MTA is notified, but, from the available literature and interviews of counterterrorism officials, it appears to be from the police department; whether it is from the NYPD Transit Police Department representative or from the Communications Unit (9/11 dispatcher) is unclear.

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[43] Wilson et al., "Securing America's Passenger-Rail Systems," 19.

[44] Brian Taylor, Robin Liggett and Ellen Cavangh, "Designing and Operating Safe and Secure Transit Systems: Assessing the Current Practices in the United States and Abroad," Mineta Transportation Institute, 2005, 136.

[45] *Metropolitan Transportation Authority Response to Rapid Transit Emergencies*. P/I 10.32.3, Addendum, July 22, 2005.

Once the police department notifies the MTA of a confirmed explosion, they will transmit the evacuation order to their employees. The train conductors will then pull the train into the next station and evacuate the trains onto the platform. They are supposed to then take the train back to the train yard from which they started. No clear provision exists to evacuate the passengers from the platforms and stations, just off the trains.[46] In a preparedness review of the MTA, a September 2003 Mineta Transportation Institute Report concluded, "Another concern for the MTA is the lack of a centralized and consistent emergency response plan for dealing with incidents at major stations."[47]

A problem with the current plan is how the evacuation will take place. The train conductors are supposed to evacuate the passengers from the train onto the platform, but that is where the current plan ends. The passengers must be totally evacuated from the subway system in order to be safe, so any plan should require them to be evacuated from the system and then directed to a secure place for medical evaluation, etc. Paul A. Erickson states this in his book, *Emergency Response Planning for Corporate and Municipal Managers.* He writes, "evacuated personnel must be managed effectively to ensure proper compliance with corporate post-evacuation procedures, including procedures regarding the control of personal vehicles, medical consultation and follow-up."[48]

The literature has demonstrated that there is a substantial threat to the train and subway systems in New York, as well as around the country. It also shows the difficulty in how to adequately protect and evacuate the system.

C. HYPOTHESIS

New York City and the United States' train and subway systems are currently at risk of a conventional improvised explosive attack from terrorists, like those that have occurred in other cities around the world. Most systems are too porous to protect every

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[46] *Metropolitan Transportation Authority Response to Rapid Transit Emergencies*.

[47] Brian Jenkins and Frances Edwards-Winslow, *Saving City Lifelines: Lessons Learned in the 9-11 Terrorist Attacks*, Mineta Transportation Institute, September 2003, 43.

[48] Paul A. Erickson, *Emergency Response Planning for Corporate and Municipal Managers*, Academic Press, 1999, 72.

entrance and exit. Even if this were possible, the physical screening of every passenger is just not practical due to the volume of passengers. Other proposed screening techniques, such as relying solely on the aforementioned “BOSS” technique, are also impractical due to the volume.

Through research of the past major terrorist attacks on train and subway systems, along with examination of the current policies and procedures plans in place, specifically in New York City, this thesis has formulated a strategy to protect subway and train systems.

Modifying a successful crime fighting strategy, CompStat, to deal with the complex problem of the threat of terrorism as it relates to the train and subway system, a practical strategy has been developed. It utilizes programs and initiatives that are already in place, but have never been put together in a cohesive manner and written down so they can be tested and managed properly. One of the main reasons why CompStat is so successful in reducing crime is because the precinct commander is held responsible for success or failure. This strategy will enable a manager to follow a guide to protect the train and subway system utilizing proven techniques in combating crime in addition to current successful counterterrorism techniques in use.

The objective of the research was to quantify in a written strategy the measures, both crime and counterterrorism related, that are in place to protect the New York City Subway System, while showing that the strategy is applicable to all mass transit train and subway systems in large metropolitan areas. This was accomplished by examining programs already in use in the New York City Police Department for counterterrorism, as well as, crime reduction and by culling the best practices and placing them into a written strategy. By examining and combining the best practices from these two programs, a realistic layered strategic approach to protect the incredibly porous train and subway system was developed.

It contributes to the existing literature by creating a written strategy that does not exist, therefore filling a void in the literature. The main strength of the thesis is that it combines a layered approach, utilizing assets many cities already may have and just

redirects these resources to concentrate on a very likely target. The benefit of the lives saved will be invaluable and will be worth any additional costs, if any, that may be incurred.

Another important recommendation this thesis makes is that municipalities should start thinking of terrorism along the same lines that it deals with crime. When combating crime, the deployment of resources is driven by intelligence collected on the most likely areas where major crimes are likely to occur. The resources are deployed in the most effective manor with the end result being a reduction in crime through prevention or apprehension of perpetrators. The deployment of resources and any subsequent arrests does not totally eradicate crime, but does reduce the threat of further crimes to an acceptable level for society to function normally. The same approach needs to be taken when we are dealing with terrorism. Transit systems should deploy resources and technology in areas driven by intelligence collection and analysis so that the threat of a major terrorist attack is reduced to a level that society can accept and continue to function.

No major city can overact and make their mass transit system so secure that it becomes unusable for the public. The very nature of a mass transit system relies on rapid movement of a large volume of passengers. Retired Colonel and Director of the Institute for Homeland Security, Randall J. Larsen, has stated, "One of the primary goals of terrorism is to create fear and to cause people — leaders and citizens — to overreact. We must not help terrorists achieve their goals."[49]

The threat of terrorism should not become a paralyzing force and make municipalities spend unacceptably large amounts of money on mass transit security. One of Al Qaeda's main goals is to cause financial ruin to the United States and eventually to ruin the economy. Osama Bin Laden made this very clear when he stated:

[49] Randall J. Larsen, *Our Own Worst Enemy*, New York: Grand Central Publishing, 2007, 26.

> We bled Russia for ten years until it went bankrupt and was forced to withdraw in defeat….We are continuing in the same policy to make America bleed profusely to the point of bankruptcy.[50]

By implementing complete screening of passengers and baggage on every train system as they do at airports, or by retrofitting every subway and train car to become blast proof, the system would not be economically viable. Almost all train and subway systems already have to rely on government subsidies to remain afloat, so adding to that cost will cause economic ruin.[51] When discussing how to realistically mitigate the threat of terrorism, Larsen further recommends, "Development of standards for prevention, mitigation, and incident management programs that are fiscally sustainable for the long haul."[52]

The best way to prevent the terrorists from obtaining their goal, which is to cause so much fear that we change our way of life and to cause the United States economic ruin, is to diminish the threat and damage as much as possible. The most efficient way to do that is through a proven and practical crime fighting approach. The NYPD's CompStat system has reduced violent crime to record low numbers in New York and by taking the same approach to countering terrorism, this thesis contends that the threat of violent terrorism on the subway system can be equally reduced.

A CompStat counterterrorism strategy would be to apply the concepts of crime fighting to the threat of terrorist attacks within New York, specifically when dealing with the threat of terrorism on the train and subway systems. This strategy is not a foolproof approach that promises complete and total protection. Such a strategy may not even be possible and certainly would not be logistically or economically viable.

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[50] Gal Luft, "Al Qaeda's economic war against the United States," *Energy Security*, January 24, 2005. http://www.iags.org/n0124052.html [accessed November 15, 2006].

[51] Associated Press, "House refuses to cut rail subsidy," *USA Today*, July 24, 2007 http://www.usatoday.com/news/washington/2007-07-24-amtrak_N.htm [accessed February 18, 2008].

[52] Larsen, *Our Own Worst Enemy*, 86.

By taking a proven law enforcement approach, specifically to protecting the train and subway systems, an acceptable level of risk can be achieved and effective protection can be applied, while allowing the system to remain economically viable.

This is exactly what this thesis has accomplished, providing a realistic and actionable strategy to mitigate the very real threat of a terrorist attack on a train or subway system.

This hypothesis of applying a CompStat model to combating terrorism, specifically as it relates to the train and subway system, has been tested by first examining whether the CompStat system itself is a valid and successful strategy that could translate to other municipalities around the country. Once this was accomplished, the CompStat system components were examined to ensure that it would apply to a counterterrorism strategy. Finally, the new CompStat counterterrorism strategy was examined to ensure that it could translate to other train and subway systems.

D. METHODOLOGY

The analytical framework for this thesis draws upon the previously implemented NYPD CompStat strategy and policies and compares them to current counterterrorism procedures in place within the NYPD. By examining and testing the validity of the NYPD's CompStat approach to fighting crime, the author was able to test the viability of his strategy because it used the same strategy but applied it to the threat of terrorism on the train and subway system.

Data was collected by examining case studies in New York and the results of a full-scale exercise that was sponsored by the New York City Office of Emergency Management. The exercise, which included all of the first responders within the City of New York, such as the NYPD, the Fire Department and various other agencies, occurred on August 26, 2007. The scenario used for this exercise was an explosion and subsequent fire onboard an Amtrak train within Pennsylvania Station, New York. Whereas the exercise did not test the preventative aspects of protecting the train and subway system, it did test the current emergency procedures in place, such as evacuation and response.

The results of the full-scale exercise were used to examine the suitability of the current evacuation and emergency response procedures considering the type of terrorist threat that New York currently faces.

Additionally, all available programs currently in place, evacuation plans and emergency incident plans were examined. Onsite visits to operating sites such as the New York City Rail Control Center, the NYPD's Counterterrorism Division, the New York City Command and Control Center and the New York City Subway System were conducted.

Interviews of current practitioners in this arena were conducted to examine and research the counterterrorism practices currently in place in New York City. Based upon the performance history of Compstat as it relates to crime reduction and the existing counterterrorism practices in the current literature and in practical use, as well as examination of the results of the full-scale exercise, a recommendation of a strategy to protect the train and subway system is proposed.

This thesis will examine whether the CompStat System is a valid and successful strategy and will include a review of whether a counterterrorism strategy to protect the train and subway system can follow the CompStat approach. Following that examination, the proposed new CompStat counterterrorism strategy will thoroughly describe each component: intelligence, detection, effective deployment, relentless follow-up, and recovery. Finally, the thesis ends with a conclusion of whether the new strategy is viable or not.

1. CompStat

In order to test the theory that a Compstat counterterrorism strategy will reduce the threat of terrorism in the train and subway system, the validity of the CompStat strategy must be examined. One indication of whether it is a viable strategy is to impartially check crime statistics. After all, an essential test of a crime reduction strategy is to examine if it actually reduces crime.

The CompStat system concentrates on the seven major crimes of: murder, rape, robbery, burglary, felony assault, grand larceny and grand larceny auto.[53] The CompStat system measures these crimes because they are part of the FBI's Uniform Crime Report that it publishes each year on crime statistics for the entire country.[54]

An examination of the crime statistics in New York City for the years since CompStat was implemented through 2007 was conducted. This assessment revealed a reduction in the crimes measured of more than 77%, from 312,332 crimes committed in 1995 to only 120,516 committed in 2007.[55]

Below is a reproduction of CompStat report from the NYPD website that clearly shows the reduction over the years:

Police Department
City of New York

Michael R. Bloomberg
Mayor

Raymond W. Kelly
Police Commissioner

Volume 15 Number 6

CompStat

Citywide

Historical Perspective

(Historical perspective iis a complete calendar year of data.)

	1990	1995	1998	2001	2007	% Chg '07 vs '01	% Chg '06 vs '98	% Chg '06 vs '95	% Chg '06 vs '90	
Murder	2,262	1,181	629	649	496	-23.5	-21.1	-58.0	-78.0	Murder
Rape	3,126	3,018	2,476	1,930	1,302	-32.5	-47.4	-56.8	-58.3	Rape
Robbery	100,280	59,733	39,003	27,873	21,681	-22.2	-44.4	-63.7	-78.3	Robbery
Fel. Assault	44,122	35,528	28,848	23,020	17,261	-25.0	-40.1	-51.4	-60.8	Fel. Assault
Burglary	122,055	75,649	47,181	32,694	21,596	-33.9	-54.2	-71.4	-82.3	Burglary
Gr. Larceny	108,487	65,425	51,461	46,291	44,935	-2.9	-12.6	-31.3	-58.5	Gr. Larceny
G.L.A.	146,925	71,798	43,315	29,607	13,245	-55.2	-69.4	-81.5	-90.9	G.L.A.
TOTAL	*527,257*	*312,332*	*212,913*	*162,064*	*120,516*	*-25.64*	*-43.40*	*-61.41*	*-77.14*	**TOTAL**

[56]

Figure 1. CompStat report shows past reductions

[53] NYPD CompStat website, http://www.nyc.gov/html/nypd/downloads/pdf/crime_statistics/cscity.pdf [accessed February 18, 2008].

[54] FBI website, http://www.fbi.gov/ucr/prelim2007/table3.htm [accessed February 23, 2008].

[55] NYPD CompStat website.

[56] Ibid.

The statistical evidence has shown that a reduction in crime can be directly correlated to the implementation of the CompStat system. Because of this apparent success, it has been duplicated across the country. From New York City, all the way to Los Angeles, California, many cities have implemented CompStat and crime reduction has followed.[57] Almost 60 percent of the larger police departments, those with 500 or more sworn officers, have implemented a Compstat-like program.[58] Cities such as Baltimore, Atlanta, New Orleans and Los Angeles have all experienced significant crime reductions after implementing a CompStat strategy.[59]

Besides the empirical data, research has shown the experts in the field of criminal justice have stated that the NYPD's CompStat strategy is successful: Since its introduction in early 1994, Compstat has proven to be highly effective in achieving the goals for which it was initially intended.[60]

> Compstat has already been recognized as a major innovation in American policing. In the few years since its appearance, police departments around the country have begun to adopt Compstat or variations of it. The program has received national publicity, including awards from Harvard University and former Vice President Al Gore, and has been credited by its originators and proponents with impressive reductions in crime and improvements in neighborhood quality of life.[61]

Compstat has been recognized as an effective and successful management tool and was a recipient of the prestigious Innovations in American Government Awards in

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[57] Los Angels Police Department Compstat website, http://www.lapdonline.org/assets/pdf/cityprof.pdf [accessed February 23, 2008].

[58] David Weisburd, Stephen D. Mastrofski, Rosann Greenspan, and James J. Willis, "The Growth of Compstat in American Policing," *Police Foundation Reports*, April 2004, 12.

[59] The Crime Fighters Criminal Justice Network website, http://www.thecrimefighters.net/crime_reduction.htm [accessed March 5, 2008].

[60] Vincent Henry, "Managing Crime and Quality of Life Using COMPSTAT: Specific Issues in Implementation and Practice," 117. http://www.unafei.or.jp/english/pdf/PDF_rms/no68/08_Dr.%20Henry-2_p117-132.pdf [accessed March 5, 2008].

[61] Weisburd et al.,"The Growth of CompStat in American Policing."

1996. This prestigious award is conferred jointly by the Ford Foundation and Harvard University's John F. Kennedy School of Government.[62]

Through an examination of statistical data, opinions and literature from experts in Criminal Justice and the fact that the CompStat strategy has been honored with esteemed awards, it convincingly appears that CompStat is a successful crime reducing strategy.

2. Does CompStat Translate to Counterterrorism?

It appears that CompStat is a valid crime reduction strategy, but that does not indicate that it will unilaterally translate to a counterterrorism strategy. An examination of the major components of the CompStat strategy was conducted to assess whether it would be viable to incorporate them into a counterterrorism strategy.

As previously described, the first component of the CompStat crime reduction strategy is intelligence. It is vital in combating crime and research has shown that it is also vital in a counterterrorism strategy. In fact some counterterrorism experts have stated that it is the "key" to a counterterrorism strategy.[63]

The second component of the CompStat strategy is detection, which is accomplished in crime fighting by victims, witnesses and video cameras. Detection is an integral part of counterterrorism as airline passengers find out every time they go to an airport and have their bags searched and have to pass through a metal detector. The Transportation Security Administration (TSA) agents are trying to find, or detect, a potential terrorist and any weapons he may carry.[64]

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[62] Vincent E. Henry, "CompStat Management in the NYPD: Reducing Crime and Improving Quality of Life in New York City," 102. http://www.unafei.or.jp/english/pdf/PDF_rms/no68/07_Dr.%20Henry-1_p100-116.pdf [accessed March 5, 2008].

[63] Michael Sheehan during Ed Bradley interview for "60 Minutes," "Inside the NYPD's Anti-Terror Fight," http://www.cbsnews.com/stories/2006/03/17/60minutes/main1416824.shtml [accessed February 18, 2008].

[64] Transportation Security Administration website, http://www.tsa.gov/what_we_do/screening/security_checkpoints.shtm [accessed February 23, 2008].

The next component of the CompStat strategy is effective deployment. TSA agents are deployed at airports in order to prevent a potential terrorist from boarding a plane. Deployment is certainly a major component of a counterterrorism strategy.

The final component of a Compstat crime fighting strategy is relentless follow-up. This entails criminal investigations and basic detective work. Investigations or 'follow-up' is a main focus of counterterrorism. In fact, an FBI Press release in 2002 reported that almost 500 special agents were moved from investigating crime to investigating counterterrorism.[65]

It is apparent from an examination of the research conducted that the components of CompStat could easily translate to a counterterrorism strategy. In fact, the key components of the CompStat strategy are the key components of any counterterrorism strategy.

Elements of a Strategy	**Crime Reduction**	**Terrorism Prevention**
Intelligence	✓	✓
Detection	✓	✓
Effective Deployment	✓	✓
Relentless Follow-up	✓	✓

Table 1. Comparison of elements of crime reduction and terrorism prevention

In fact some homeland security experts are calling for a CompStat approach to counterterrorism. Heather MacDonald, a fellow at the Manhattan Institute has written that the NYPD Compstat tools "are tailor-made for combating terrorism."[66] She further states

[65] FBI website, http://www.fbi.gov/pressrel/pressrel02/dojoig100102.htm [accessed February 23, 2008].

[66] Heather MacDonald, "Keeping New York Safe for Terrorists," *The City Journal*, Autumn 2001, http://www.homelandsecurity.org/journal/articles/HeatherMacDonald.htm [accessed March 5, 2008].

that the system should be used across the country: The FBI's anti-terrorism efforts should be Compstated in every city where the bureau operates.[67]

Dr. Vincent Henry, an Associate Professor and Director of the Homeland Security Management Institute at Long Island University, who has studied the CompStat process, also agrees that it could apply to combating terrorism:

> The same strengths that make Compstat work to reduce crime or to manage an entire city can easily be brought to bear on the threat of terrorism, with the same potential for success.[68]

With the validity of the CompStat strategy recognized and the knowledge that the main components of the strategy translate well into a counterterrorism strategy, the following is a description of a Compstat strategy to protect the train and subway system.

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[67] MacDonald, "Keeping New York Safe for Terrorists."

[68] Henry, "Managing Crime and Quality of Life."

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II. INTELLIGENCE

Intelligence collection and distribution is a central theme throughout the CompSat crime fighting process. It drives all of the other parts of the process and is integral to its success. For any CompStat counterterrorism strategy to be successful, the intelligence component is invaluable. Former Deputy Commissioner of Counterterrorism for the NYPD, Michael Sheehan has stated: "The key to counter-terrorism is intelligence"[69]

Knowing this fact about intelligence, Police Commissioner Raymond W. Kelly transformed the NYPD:"I knew we had to configure the department differently. We had to change our mindset."[70]

This need to be innovative and bold in their protection of their citizens led the NYPD to develop a Counterterrorism Bureau and redirect the focus of the Intelligence Division. One of the most significant changes the NYPD made was to increase the officers assigned to collect intelligence both inside the city, but also outside. In fact the NYPD has assigned officers overseas to collect intelligence. The old way of doing business and waiting for intelligence to flow down from the federal government was not working. Commissioner Kelly has made this very clear:

> We need the information. We're a city, the only U.S. City, of course, that's been attacked, twice successfully, by terrorists. We can't rely solely on other agencies to protect us here. So there's nothing like self-help, and that's what we're doing.[71]

It is not the fault of the federal government. They do not have the resources to combat the new breed of terrorism. Homeland security experts have expressed this sentiment:

> When terrorists crashed planes into the Pentagon and the World Trade Towers on September 11th, the first calls for help went out to the police and other local first responders—not to the CIA or the FBI. In order to

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[69] Ed Bradley interview for "60 Minutes."

[70] Ibid.

[71] Ibid.

> prevent or recover from any future terrorist attacks, local officials and police must be prepared to take the lead in the war on terror and not wait for direction from federal agencies hundreds of miles away. Rather than passively acquiescing to dictates from Washington, America's police chiefs and other urban leaders must build on their successful experience of the last 15 years and design new programs to share criminal and terrorist related intelligence; penetrate and disrupt potential terrorist cells in the cities and towns where they operate; and develop their own "best practices" for combating suicide bombers and protecting local critical infrastructure. Anyone—at the local or federal level—who thinks that federal agents can adequately shoulder this responsibility ignore the fact the FBI has less than 10,000 agents nationwide, and that the CIA is focused on collecting foreign, not domestic intelligence.[72]

Due to the perceived need for intelligence, the NYPD, although robust, is still a local law enforcement organization, that created its own international intelligence network. Homeland security officials have stated that:

> The NYPD, with its extensive counterterrorism division that monitors foreign news services and actually has officers stationed overseas, is widely recognized as the gold standard in this regard.[73]

The NYPD reformed itself in the wake of 9/11. They already had the most robust Joint FBI Terrorism Task Force in the nation, but it was not enough. Commissioner Raymond Kelly brought in counterterrorism experts from outside the department to assist with the transformation. Experts from the Central Intelligence Agency, the United States Military and Academia have all contributed to the reform.

Some of the programs developed include the "International Liaison Program," which involves assigning NYPD personnel to a number of different posts throughout several countries.[74] There are ten (10) posts in eight (8) different countries. The officers assigned to these posts are to liaison with the local law enforcement intelligence community and assist in analyzing any intelligence information, with a particular

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[72] Timothy P. Connors and Georgia Pellegrini, "Hard Lessons Won: Policing Terrorism in the United States," Safe Cities Project, the Manhattan Institute, July 2005, 5. .http://www.manhattan-institute.org/pdf/scr_03.pdf.

[73] Sahm, *Hard Won Lessons*, 8.

[74] NYPD FINEST Message serial #013226, September 14, 2007.

emphasis on the impact of the information on New York.[75] They are to provide a direct link to the NYPD to relay information, unfettered by other United States intelligence agencies. The idea is to provide information as fast as possible to the most targeted and most likely location for future terrorists' attacks, New York City. The program was developed after frustration with the old way of doing business, such as waiting for the FBI to pass on information concerning New York in a timely manner. The program has now been in place for several years and the officers involved have quickly passed on information from the scene of terrorist incidents around the world, including the train bombings in Madrid.

The Manhattan Institute for Policy Research has stated:

> As a direct result of the officers' observations of vulnerabilities in Madrid's transit system, New York City made immediate tactical adjustments in its own subway security.[76]

The tactical changes observed by the Manhattan Institute should also inform the national strategy. This is a positive indication that this type of program can directly assist in a national strategy to protect a local municipality's train and subway system.

The officers assigned to these posts are not taking traditional law enforcement action in the foreign countries; instead, as described in an internal NYPD message, they are "gathering accurate and reliable information on a wide range of law enforcement topics, quickly responding to critical incidents within a region of responsibility and making and maintaining international law enforcement contacts."[77] Their main function is to establish professional relationships with the local law enforcement agency and report any meaningful intelligence information directly back to the NYPD, without delay.

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[75] Sergeant Robert Ruggiero, NYPD Intelligence Division Personnel Officer, author interview, October 30, 2006.

[76] Anya Sostek, "Out of the twin Towers' ashes, NYPD is building a world-class terror-fighting machine" *Securing the Homeland*, Manhattan Institute for Policy Research, October 2004, http://www.manhattan-institute.org/html/_govmag-out_of_the_twin_towers.htm.

[77] NYPD FINEST Message serial #013226, September 14, 2007.

The proposed Foreign Liaison Officers Against Terrorism (FLOAT) Grant Program[78] would open up this idea to police departments throughout the country. This idea was developed because:

> Major city law enforcement executives agree that one of the best ways to help thwart terrorist attacks in this country is to send liaisons from their departments to their counterparts overseas in order to boost their understanding of how terrorists are operating internationally and to obtain on-the-scene situational awareness whenever attacks occur abroad.[79]

The program would allow departments to identify foreign cities where a presence is desired, divide those cities among the departments participating in the program and assign particular agencies to staff those positions. These departments would then share what they learn from their liaisons abroad with the other departments participating in the program.[80] The FLOAT program appears to be a way for any police department tasked with providing protection of a train or subway system to deploy officers internationally even if they have limited resources. This program is acknowledgment that local police departments, who do not have the resources of the larger departments, such as the NYPD, still need the vital international intelligence information.

Besides the Intelligence Division, the NYPD also has a Counterterrorism Bureau that is tasked with analyzing current terrorist trends and providing effective deployment strategies to prevent an attack. One unit within the Counterterrorism Bureau is the Terrorist Threat Analysis Group (TTAG) which is composed of both veteran NYPD detectives and highly educated civilian analysts who examine world events, both "open source" and in classified material, in order to make recommendations for deployment of resources and procurement of equipment.

Another section of the Counterterrorism Bureau is the NYPD SHIELD program, which is a partnership with the public that provides counterterrorism information quickly

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78 "Law Enforcement Assistance and Partnership Strategy" Prepared by the Democratic Staff of the Committee on Homeland Security of the U.S. House of Representatives, 10. [accessed October 5, 2007] https://www.hsdl.org/homesec/docs/dhs/nps24-100506-01.pdf&code=61f4fa989d269d355d2a220f1e538891.

79 Ibid.

80 Ibid.

and directly to public companies and corporations. These companies, such as the New York Stock Exchange and American Express, are very often the targets of the terrorists and have their own security procedures, which are often enhanced by the information distributed. Sometimes, federal agencies hold unclassified information too long instead of pushing it out to the public companies that can benefit from the information. One example would be the unsuccessful attempt to bomb the London nightclub, "Tiger, Tiger". Just days before that attempted attack, the nightclubs in London were issued an unclassified 53-page report warning them about vehicle borne improvised explosive devices (VBIED), amongst other terrorist tactics, from the National Counter Terrorism Security Office.[81] It is unknown if this report was instrumental in the discovery of the two VBIEDS, but the important part is that the United Kingdom published and shared this information with the private sector. As of the publication of this thesis, the FBI has distributed no such report locally.

The NYPD is changing that by providing accurate and timely unclassified information to its SHIELD members through SHIELD briefs. These briefs are researched and written by the intelligence research specialists, the NYPD counterterrorism analysts, through open source as well as their international contacts that have been forged through the years. They are then emailed to NYPD members and published on the SHIELD website for private sector members to access.

The main benefit is the speed of which the briefs are published. Several incidents, such as the plot to ignite the fuel transfer lines at JFK International Airport and the assassination of Benazir Bhutto, were published on the website a few short hours after the incidents became public.[82] The major news networks constantly broadcast vital information much quicker than any reliable government agency. The SHIELD briefs are an attempt to investigate and evaluate all of the current open source information on an incident, analyze that information and then consider the implications for New York. Once that has been accomplished, the priority becomes placing that information in an accurate, informative, and

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[81] Stewart Tendler, Michael Horsnell and Adam Fresco, "Nightclub Bomb Alert Issued Two Weeks Ago," *The Times*, June 30, 2007 http://www.timesonline.co.uk/tol/news/uk/crime/article2007873.ece [accessed March 5, 2008].

[82] Lieutenant Raymond Martinez, NYPD SHIELD Unit leader, Author interview, December 27, 2007.

easily digestible format for the public and for private security partners to receive so that they may take adequate precautions. The SHIELD briefs are certainly the only one of its kind coming from a “local” police department.

The program does not require a great deal of funding or personnel resources to operate, so other departments across the country could develop a similar program of their own.

Below is an actual example of a SHIELD brief that was created by the NYPD Counterterrorism Bureau and published through the SHIELD website:

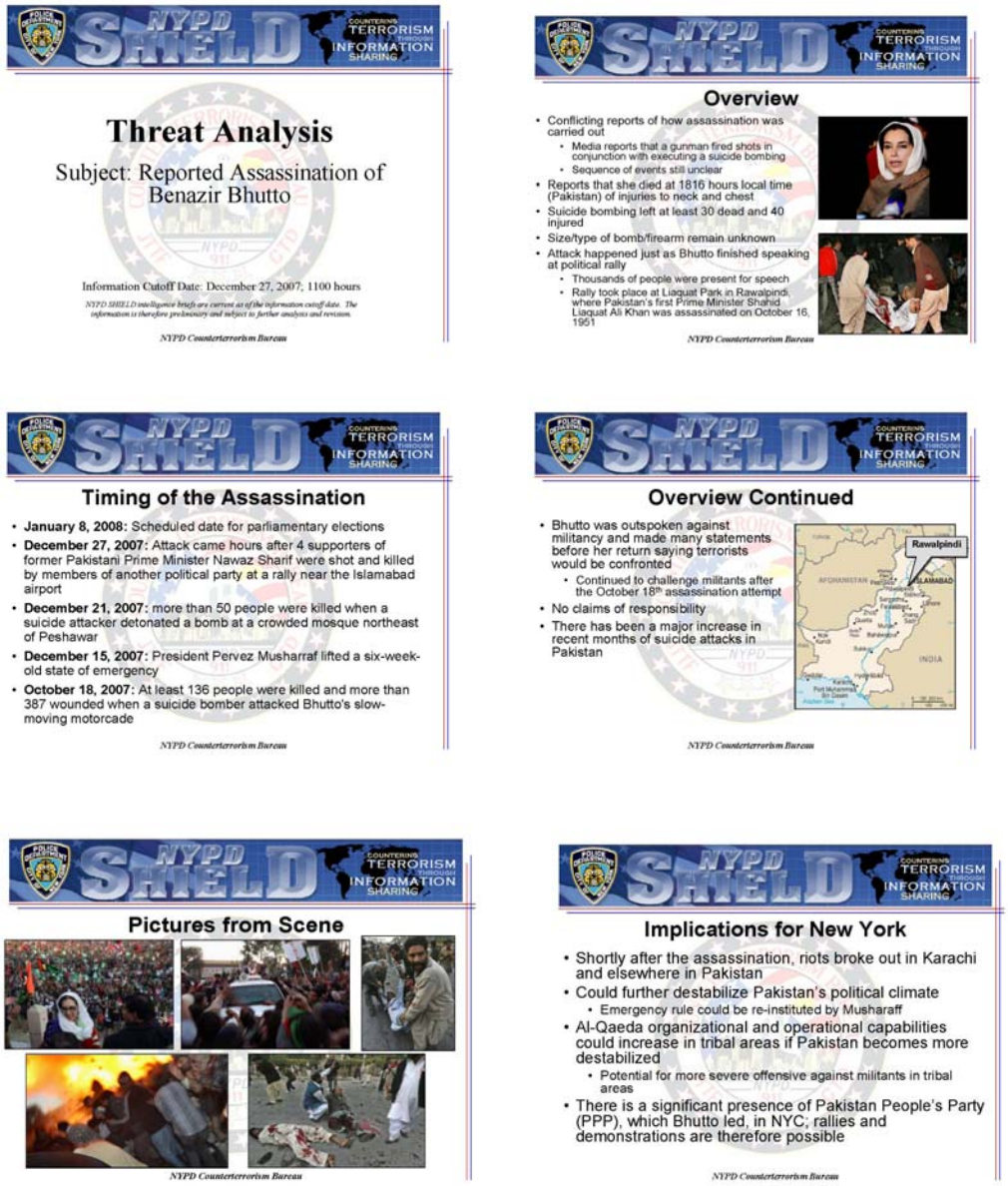

Figure 2. SHIELD brief created by the NYPD Counterterrorism Bureau.

Instead of waiting for information and training to be passed on, the NYPD has developed its own programs and initiatives. "Radicalization in the West: The Homegrown Threat"[83] is a publication based on years of research by NYPD intelligence analysts who have studied past cases and developed a formula for identifying possible steps to radicalization. No other law enforcement agency in the United States, whether federal or local, has developed such an analysis. A senior analyst with the RAND Corporation has stated, "Although there have been informative analyses of the paths to violent jihad in individual countries, the NYPD report is the most comprehensive review across national boundaries." [84]

As the NYPD has demonstrated, local law enforcement does not need to take a backseat to any federal law enforcement agencies. In an ideal world, local, state and federal law enforcement would all work seamlessly together. Reality, however, proves that to be quite difficult. Not all police departments need to do as much as the NYPD, but some should be doing more to protect their cities and states from attacks. Simply relying on the federal resources to provide accurate and timely intelligence is not appropriate in today's age of terrorism, where radicalized "homegrown" terrorists come from within the very local community those police departments protect.

There have been several "homegrown" cases in various states throughout the country, including upstate New York, Portland, Oregon, and Northern Virginia, as well as right in New York City. These homegrown cases highlight the importance of local intelligence; it will be the local law enforcement agencies that will have to discover these particular plots.

Fusion centers were originally created to improve the sharing of anti-terrorism intelligence among different state, local and federal law enforcement agencies.[85] The

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[83] Mitchell D. Silber and Arvin Bhatt, "Radicalization in the West: The Homegrown Threat," NYPD 2007.

[84] Brian Michael Jenkins, "Combating Radicalization," RAND Corporation, August 23, 2007, http://www.rand.org/commentary/2007/08/23/UPI.html. [accessed February 21, 2008].

[85] Michael German and Jay Stanley, "What's Wrong with Fusion Centers?" *American Civil Liberties Publication*, December 2007, 3. http://www.aclu.org/pdfs/privacy/fusioncenter_20071212.pdf [accessed March 5, 2008].

centers are popular, mainly because of federal funding, and because they solve some of the problems of information sharing. Sometimes, however, they are prevented from even passing the information along because of the issue of federal security clearances. A 2007 Government Accountability Office report stated that forty-four of the fifty-eight fusion centers examined had trouble obtaining and using security clearances. Nineteen fusion centers also reported problems between DHS and the FBI recognizing each other's clearances.[86]

Knowing how to properly utilize all of the intelligence is not always easy. A local law enforcement agency must understand the threat they face to judiciously use intelligence they receive. They need to know the community they serve to adequately understand the threats they face. Only by having a local intelligence system in place, can they accomplish this feat.

It does not have to be so robust and formalized in all cases. Larger police departments should have a formal structure so its officers know how and where to report any information they have, but some of the smaller departments may benefit from a more informal intelligence structure. Smaller departments may only perform uniform patrol and not even conduct their own criminal investigations. They may rely on the state or others to conduct their formal criminal investigations. This does not preclude them from having an informal system regarding gathering intelligence. It may be as simple as developing a culture within the agency where they are aware of possible terrorist activities. This may include being able to spot suspicious materials during automobile traffic stops or from noticing odd or suspicious behavior from their local residents. The main idea is to develop a rationale for the particular local police agency to play a role in intelligence gathering.

Some of the reasons local law enforcement agencies should create their own intelligence agencies are because the intelligence you create is yours to utilize and a local police department knows its own vulnerabilities better than any federal agency does.

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[86] United States Government Accountability Office, "Homeland Security Federal Efforts are Helping to Alleviate Some Challenges Encountered by State and Local Information Fusion Centers," October 2007, 6. https://www.hsdl.org/homesec/docs/gao/nps37-011008-01.pdf&code=e80ebf4fb21976ab5f9745cb31d1ed7f [accessed March 5, 2008].

When a local police department creates intelligence, it can disseminate that intelligence how it sees fit. This is important when it comes to dealing with intelligence due to the issue of clearances.

Getting federal security clearances is a time consuming and costly undertaking. Clearances can take anywhere from six months to over a year. That is a very long time when it comes to having information that may be useful for an agency. The intelligence distribution needs to occur quickly because as Washington, D.C. Metropolitan Police Chief Cathy Lanier stated in testimony before congress:

> If we learn about a threat only when it becomes imminent, it's too late.[87]

If a police department obtains information through its own sources, it can then use that information and share it amongst its members without worrying about which members have security clearances and which ones do not. This becomes a major issue when trying to spread a "culture of preparedness" amongst patrol forces, but not being able to tell them about threat information that is classified. Of course, information can be sanitized so it can be spread, but that very often makes the information so unspecific that it looses a majority of its impact.

When a department is constantly trying to have its patrol force remain vigilant, being able to tell them specific information about ongoing plots or cases helps make the officers more receptive to mundane, although important assignments. One of the lessons learned from the 9/11 Commission was a failure to share intelligence. One of the criticisms of the commission concerning intelligence sharing stated:

> Security concerns need to be weighed against the costs. Current security requirements nurture over-classification and excessive compartmentation of information among agencies. [88]

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[87] Washington D.C. Metropolitan Police Chief Cathy Lanier, Testimony, Senate Select Intelligence Committee, January 25, 2007 https://www.chds.us/courses/file.php/148/moddata/forum/1303/23052/SSCI_Intel_Reform_hearing.pdf

[88] National Commission on Terrorist Attacks, *9/11 Commission Report* (New York: Norton, 2004), 417.

Every local law enforcement agency knows its area better than any one else. Whereas a local cop knows the streets he patrols, local police departments know the cities and towns for which they are responsible. That local knowledge is important when figuring out vulnerabilities regarding targets and critical infrastructure. Information in the correct hands is very valuable, but without the local knowledge of vulnerabilities, there can be no true valuable intelligence.

Local police departments also know the community they protect. They know the people in the community and the people know them because of outreach programs such as community policing and community meetings. With the specter of "homegrown" terrorism on the rise, information about radicalized members of the Muslim community, in particular, is more likely to be passed on to local police, who have more rapport with the community than any federal entity. The people best suited to deal with these local threats are the "local" law enforcement agencies.

Terrorism expert Clark McCauley states:

> Fighting terrorism effectively is more like police work than military combat. Effective police work requires understanding local culture, knowing the details of social and physical geography in a local area, developing local relationships, and cultivating local sources of information.[89]

Sometimes passing the information internally, down to the patrol officers on the streets in larger departments, can be an issue. The NYPD collects and publishes a tremendous amount of intelligence information, but this information is useless unless it is put in the minds of the patrol officers. The way the NYPD passes on the information is through the use of the Intelligence Division's field intelligence officers who are assigned to each precinct, Housing Public Service Area (PSA) and transit district. They not only pass on the intelligence information, they act as a "local" deposit within the NYPD for information collected in the field.

[89] McCauley, "War Versus Justice," 61.

Another way the intelligence information is passed on to the patrol officers is through the use of a video teleconference system.[90] This video teleconference system was originally designed to allow NYPD executives from a central location, such as their offices at One Police Plaza, to communicate with each and every officer on patrol at the same time, since each precinct, PSA and transit district has them installed. Their image and sound would broadcast simultaneously throughout the entire department. The system was later adapted to play pre-recorded roll call training videos that used to play on VHS tapes and players.

Using this current system, the intelligence products are modified into a video format by either scanning them into digital form or by adapting the information contained therein into a PowerPoint or video format. They are then broadcast from a central hub to the entire department. This is an effective tool utilized during roll call training, especially when new information has been obtained and patrol officers need to be alerted.

The current national intelligence framework is flawed when it comes to sharing information with local authorities. With this in mind, local police departments in cities and states with train and subway systems cannot take the risk that information will be passed on in a timely manner. They must take their destiny in their own hands and act boldly. The costs of failure are too high to wait for the intelligence community to correct any deficiencies in their intelligence sharing. Only by taking the initiative and procuring their own intelligence will they stand a chance at successfully defending their train and subway systems from terrorists who are intent on doing them harm.

[90] Unique Systems website, http://uniquesystems.org/ [accessed February 18, 2008].

III. DETECTION

If the first layer in a CompStat strategy to protect a train or subway system is intelligence collection and dissemination, then the next layer is detection.

One of the most popular and useful tools in detection is video cameras. Although New York City has hundreds of video cameras in use, no scholastic study of camera systems in the train and subway system would be complete without examining the London Underground.

The London Underground has the most advanced closed circuit camera system of any transportation system. Throughout their system, approximately 6,000 cameras record the images while personnel are assigned to view the images in real time. Transit security experts have reported:

> The London Underground is a prime example of forensic security design. With more than 6,000 closed circuit television (CCTV) cameras located in trains and at nearly all stations, police officers assigned to the underground can review video after any incident and find out what happened.[91]

Their system is a model for others to follow and was instrumental in gathering information on the terrorists of both July 7, 2005 and July 21, 2005. The cameras played an integral part of their investigation:

> Senior sources at the Yard said they were seizing film from an estimated 2,000 cameras in the biggest operation of its kind. Film from every tube train and station will be examined as well as footage from the 12 main line termini and scores of platform cameras and trains across the British Rail network.[92]

In order to be more effective, "Smart" cameras are needed, rather than having officers just viewing images from multiple cameras, which could be quite numerous in a

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[91] Michael Fickles, "Preventing Mass Transit Terror Attacks," *Government Security*, October 1, 2005, http://govtsecurity.com/mag/preventing_mass_transit/ [accessed February 21, 2008].

[92] Jeff Edwards and Chris Hughes, "The Hunt," *The Daily Mirror* website, http://www.mirror.co.uk/news/tm_objectid=15717499&method=full&siteid=94762&headline=exclusive--58--the-hunt-name_page.html [accessed January 2, 2008].

subway or train system. Currently in the development and testing stage is computer software that analyzes images for suspicious activity and behavior.

One such system analyzed and tested by the NYPD Counterterrorism Division is the IBM Smart Surveillance System (S3).[93] This system is able to recognize unusual behavior and alert an officer. How the system works is by having normal activities programmed in and then recognized by the software.

For example, a person is walking down the street, carrying a backpack. He stops at a building for a few moments and then proceeds forward. This would be normal behavior. Abnormal behavior would be for the same person to be walking down the street, stop at the building for a few minutes, place the backpack on the ground and then walk away, leaving the backpack behind.

The video analytic software actually can detect this abnormal behavior and alert a user of the system that something unusual has occurred. The user can then conduct a further examination of the behavior to determine if there is any malicious intent. The same software can determine if the same person is in an area for a prolonged period of time or continues to walk around an area, as if conducting surveillance on a location.

The system uses current and archived footage to compare and search for the same image of that person and then compare their images. There may be a legitimate excuse for such action, such as a food delivery person making multiple deliveries to the same location. The main benefit of the analytic tool is that it alerts a human user of the fact so that an investigation into the behavior can be conducted.

This particular IBM Smart Surveillance System was tested by the NYPD Counterterrorism Division on October 27, 2007, at the New York Stock Exchange. The system worked as promised and was able to identify persons who left bags on the ground and then walked away from them.[94] The system alerted the user by flashing information

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[93] IBM research website, "S3: Video search enhances security and operational insight," http://domino.research.ibm.com/comm/research.nsf/pages/r.multimedia.innovation.2007.html?Open&printable [accessed January 17, 2008].

[94] Sergeant William Moore, NYPD Counterterrorism Division, author interview, November 30, 2007.

on the video screen. This analytic software along with a robust camera deployment will make for a comprehensive detection tool.

Below is an image of the actual video footage with the analytic software used during the test.

(Image supplied by the NYPD Counterterrorism Division Video Production Unit)

Figure 3. Picture of actual video footage of analytical software.

Another aspect of detection and information gathering involves the millions of passengers who commute each day on the train system. In New York, it is estimated that 5.1 million people ride the subway each day.[95] In order to use those passengers to help in the fight against terrorism, a public awareness campaign has been implemented.

The "If You See Something, Say Something" campaign is a public relations program that informs the public that they should contact the authorities if they spot any suspicious packages or persons.[96]

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95 Metropolitan Transportation Authority website, http://www.mta.info/nyct/facts/ffsubway.htm [accessed December 30, 2007].

96 Metropolitan Transportation Authority Website.

Figure 4. "If You See Something, Say Something" Advertisement.

The campaign informs people to:

- Be alert to unattended packages.
- Be wary of suspicious behavior.
- Take notice of people in bulky or inappropriate clothing.
- Report exposed wiring or other irregularities.
- Report anyone tampering with surveillance cameras or entering unauthorized areas.[97]

This allows the riding public to feel empowered in the fight against terrorism and to generate a large amount of intelligence information. Homeland security experts agree that the campaign is a positive step:

> Active civic outreach efforts — such as the MTA's 'If you see something, say something' campaign — stressing the need for train passengers to quickly report suspicious behavior or packages should be implemented.[98]

The public has been a vital part in crime reduction by reporting the crimes they witness as well as the suspicious behavior they observe. This has not only occurred in New York City, but across the entire nation. They are needed in the current time when

[97] Metropolitan Transportation Authority Website.

[98] Peter Chalk, "Tighten Up Mass-Transit Security," *Newsday*, August 22, 2006. http://www.rand.org/commentary/082206ND.html [accessed March 5, 2008].

the specter of terrorism looms, especially in the subway and train systems. By utilizing the public as a 'detection' system, an agency can exponentially increase the chance of detecting suspicious persons and packages.

Another resource for detection is the large number of employees that all subway and train systems utilize. By properly training these employees on what to be aware of through numerous terrorism-awareness courses and providing them with an easy-to-use reporting system, a municipality can greatly enhance their own detection ability. These employees should have reporting suspicious persons or packages as a core responsibility because they know the subway and train systems the best. The vast majority of these employees know the trains, tunnels and passengers better than anyone else; that expertise should be utilized and exploited for proactive detection.

In addition to training the public and employees to be more aware of their surroundings for terrorism related issues, the officers on patrol with the train and subway system have to be better trained. Within the theory of "collaborative capacity" there is the belief that the more education and training someone has received, the better decisions they will make as their environment grows more complex. This also allows an organization to decentralize and to have their employees use their professional judgment in complex situations.[99]

With this theory in mind, the more education and training the numerous front line patrol officers in a police department receive, the better decisions they will make when confronted with the complex situation of potential terrorists conducting pre-operational surveillance or conducting an actual attack. There are a variety of terrorism specific training programs that all officers on patrol in a subway or train system should have to make them more effective, such as Hostile Surveillance Detection and Behavior Recognition courses.

It is well documented that terrorists will conduct "dry runs" of their intended target. According to a Joint Homeland Security document that was posted on MSNBC:

[99] Erik Jansen, Senior Lecturer: Department of Information Sciences at the Naval Postgraduate School, lecture given at the Naval Postgraduate School, January 15, 2008.

7 July 2005 London Bombings: The operatives discreetly practiced a mock attack while riding the London subway in late June 2005

1994 "Operation Bojinka" Plot: Ramzi Yousef planned to simultaneously bomb multiple airplanes while flying over the Pacific Ocean and his group conducted dry runs in environments similar to that of the intended targets.

August 2006 Plot to Blow up Airliners Using Liquid Explosives: Terrorists discussed dry runs to test airport security procedures.[100]

It is during these "dry runs" that the terrorists are vulnerable to hostile surveillance detection by properly trained officers. By giving officers the Hostile Surveillance Detection course, an agency can increase the potential for intercepting a terrorist incident before it is executed. The Hostile Surveillance course teaches officers some of the characteristics that potential terrorists may exhibit, such as:

- Observing security positions and officers
- Demonstrating unusual or prolonged interest in entry and access points
- Questioning security personnel
- Taking pictures or drawing maps of areas that are non-tourist in nature
- Remaining on the platforms even though several trains have passed [101]

By giving the officers who are on patrol each day this type of training, an agency exponentially increases the chance to intercept a terrorist attack in the planning stages, before it is too late.

A variety of behavior recognition training courses is available, allowing municipalities to train their officers to recognize potentially suspicious behavior.[102]

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[100] Annie Jacobson, "MSNBC Posts Unclassified TSA 'Dry Run' Warning," The Aviation Nation, July 24, 2007 http://www.theaviationnation.com/2007/07/24/msnbc-posts-unclassified-tsa-dry-run-warning/ [accessed March 5, 2008].

[101] Sergeant Christopher Biddle, "Awareness to Hostile Surveillance in Transit Systems," Training Course, NYPD 2007.

[102] Sergeant Christopher Biddle, NYPD Counterterrorism Training Unit, author interview, February 15, 2008.

These training systems portend to add another layer of threat mitigation training at critical infrastructure facilities, such as train and subway systems, by having trained officers identify certain characteristics exhibited by potential suspects. Some of these characteristics include nervousness, avoidance of eye contact with authorities, inappropriate clothing for the current weather, etc. While no municipality can rely on these behavior-recognition training systems alone, it can add to an officer's awareness level and therefore may have some usefulness.

Police officers are used to observing behavior in traditional crimes. Illegal gun possession was a crime that the NYPD's Street Crime Unit concentrated on. The training for members of this unit included looking for a person who constantly touched or adjusted their waistband as they stepped off the curb and walked across the street. This was an indication that they may have a firearm that is loose in their waistband, not in a holster, which moves as they step off the curb. Whereas this was not the only indicator, that furtive movement, combined with other factors such as the high crime nature of the neighborhood and attempting to evade the officer as he approached, would often lead to reasonable suspicion and a frisk of the individual by the officer.[103]

Specialized training programs, such as hostile surveillance and behavior recognition, are additional layers of training that patrol officers should have in order to make them more effective. Besides specialized training, those same patrol officers should be given continuous terrorism-awareness training. This training should be incorporated into regular roll call-type training, as well as during continuous training cycles.

The training is necessary to prevent complacency among the front line officers, because as many homeland security experts have stated:

> Unfortunately, there is every reason to believe that terrorism is a long-term problem.[104]

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[103] Lieutenant William Lakis (retired), NYPD Street Crime Unit, author interview, March 5, 2008.

[104] McCauley, "War Versus Justices," 60.

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IV. EFFECTIVE DEPLOYMENT

Effectively deploying resources is very important to any municipality whether that agency has thousands of officers or just a few. In New York City, the NYPD's CompStat process revolutionized police work and reduced crime dramatically. This strategy, which effectively deployed resources, resulted in historic crime reductions.

Additionally, current Police Commissioner Raymond Kelly has not only continued the historic crime reductions, but has also added to the effective deployment with his "Operation Impact" strategy. "Operation Impact" is an NYPD program that targets specific high crime areas, which may cross traditional precinct boundaries by flooding the area with police resources. These resources consist mostly of patrol officers but also include cameras and floodlights, where needed. The effectiveness of "Operation Impact" has led to a record decline in homicides with just 492 occurring in 2007, the lowest on record, since reliable records were recorded in 1963.[105]

Terrorism experts have stated that battling terrorism is more similar to police work that military combat.[106] With this in mind, the NYPD's knowledge revolutionized how effective deployment addresses crime; the way it addresses terrorism was examined, specifically, how the NYPD deploys assets to address terrorism in its vast subway system.

The one agency that is deploying resources in a proactive, preventive manner is the NYPD. The "Hercules" and "Critical Response Vehicle Surge" deployments, as well as, the "Random Bag Screening" and "Transit Order Maintenance Sweeps (TOMS)," along with others, are models that any police department can follow.

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[105] New York One Website, http://www.ny1.com/ny1/content/index.jsp?stid=1&aid=77047 accessed [January 2, 2008].

[106] McCauley, "War Versus Justice," 61.

A. HERCULES DEPLOYMENTS

The "Hercules" deployments are small but highly visible teams of officers that are meant to disrupt the standard patrol posture. These deployments are based upon current intelligence and are usually directed at previously targeted areas or high visibility locations. These teams consist of heavily armed officers. In New York, that is the Emergency Service Unit officers, along with Intelligence Division detectives and Highway Unit personnel.

The transit locations chosen are based upon previous intelligence, whether these locations were targeted in the past or are high value targets, such as Herald Square or highly visible locations such as Grand Central Station and Pennsylvania Station. The locations chosen are important because the concept behind the deployments is to disrupt any pre-operational surveillance by potential terrorists or to quickly respond to an incident at one of the targeted locations.

The ESU officers are there to show a strong presence with heavy weapons and tactical gear, which has been shown in interviews with known terrorists to cause them fear and to adjust their targets.[107] The Intelligence Division detectives are there to conduct interviews of potentially suspicious people in the area, as well as gather information from potential sources, such as shop owners. The Highway Unit personnel are there to act as a vehicle escort for the deployment and to help arrive at each destination in a safe and quick manner.

B. CRITICAL RESPONSE VEHICLE SURGES

The "Critical Response Vehicle (CRV) Surge" deployments consist of having a police vehicle from each precinct, Police Service Area and transit district in the city respond to a pre-designated location at a pre-determined time. In New York City, that entails almost one hundred vehicles, including the appropriate supervisors. The idea is to show a strong police presence by flooding high visibility locations or high value targets with police officers in order to prevent any pre-operational surveillance or an actual

[107] Lieutenant David Kelly, NYPD Counterterrorism Division, Terrorist Threat Analysis Group, Author interview November 30, 2007.

attack. The locations are chosen based upon available intelligence and visibility of the location. The vehicles stay for a pre-determined time frame and then move in mass to another location, or break up into several different locations.[108]

Locations chosen in New York City are frequently subway stations. Typically, the CRV officers respond to several of the high profile subway stations during the morning and evening rush hour, when the trains are most crowded and history has shown the terrorists are most likely to strike. They arrive at the station, enter the subway platform and conduct a visual inspection of the area. When the trains arrive, they conduct a quick inspection of the train cars before they pull out of the station. Besides the officers performing their proactive patrol, this system provides an outlet for the passengers to report any suspicious package or behavior. Passengers who are disinclined to make a phone call under the "See Something, Say Something" media campaign, will often mention something to a police officer if he or she is conveniently located at the scene. The most common example of this is the reporting of an unattended bag. Passengers will often report that there is an unattended bag left on a platform. Whereas none of these instances have discovered an explosive device, just the passenger awareness of their surroundings is encouraging.

Another benefit of this deployment is the fact of having a substantial mobile force of officers should an incident occur. By taking officers from all around the city, a large force can be gathered without stripping any one area of all of their resources.

In smaller departments, even one officer or one patrol vehicle performing directed patrol in a small surge at a train or subway platform may be enough to dissuade a terrorist. This small surge may be enough to disrupt pre-operational surveillance or an actual attack because history has shown that typical terrorist attacks operate "on a very thin margin."[109] This means that terrorists may cancel an operation if they believe they will not succeed because an unexpected patrol officer appeared. The idea is to deploy

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[108] Chief Vincent Giordano, Citywide Counterterrorism Coordinator, NYPD, author interview November 20, 2007.

[109] David Tucker, "The Unconventional Threat to Homeland Security," Lecture at the Naval Postgraduate School, December 4, 2006.

intelligently. Placing the officers, however few, at the most crowded location and during the busiest times should be the most effective. Past history of transit attacks has shown that this is the most likely time that a potential terrorist will strike.

C. RANDOM BAG SCREENING

Another deployment and the most appropriate for securing a train or subway facility is the "Random Bag Screening". Officers are redeployed from their usual assignments to different selected subway locations and search the bags of passengers as they enter the subway system. Since the number of subway locations is so vast, it would be manpower intensive to search the bags of passengers at every location, so selected stations are chosen each day on a random basis. The locations selected are once again based upon available intelligence along with the threat and visibility of each station.

The screening of the passengers' bags is done on a random basis; this is to ensure there is no bias in whose bags are searched. This procedure has been challenged in court by the American Civil Liberties Association but has withstood the challenge and has been declared legal.[110]

Of course, if the officers conducting the screening witnessed someone acting suspiciously, they could then stop that person. If the encounter elevated to reasonable suspicion, the person could be frisked for a weapon or explosives. This would fall under the regular purview of normal police powers and not the constriction of the random bag screening.

D. TRANSIT ORDER MAINTENANCE SWEEPS

The Transit Order Maintenance Sweeps (TOMS) are performed using a team-led concept. Originally, they specifically targeted low-level criminal activity under the CompStat and "Broken Windows" strategies. Under a counterterrorism strategy, a supervisor, usually a sergeant with as many as eight police officers — once again using

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[110] Alexandra Marks, "How New York City Fights Terror," *The Christian Science Monitor*, September 11, 2006, http://www.csmonitor.com/2006/0911/p01s03-ussc.html [accessed February 24, 2008].

intelligence — will enter a predetermined subway platform and inspect the station for any suspicious activity or persons. They then board the train, with each officer entering a separate train car. They inspect the car for any suspicious packages or persons. Once they have finished the entire train, they will disembark that train and continue on to another train.

E. EXPLOSIVE TRACE DETECTION

Explosive trace detection is more technologically advanced than the basic random bag screenings. It entails a trained police officer wiping the outer garment or bag of a person with a swipe cloth and then placing that swab in a machine to identify any trace of explosive compounds. The machines the NYPD uses are handheld Sabre 4000 and can identify the chemical compounds within eight to ten seconds. They use a technology called ion mobility spectrometry. The ion mobility spectrometry (IMS) technique separates and detects electrically charged particles (ions) and sorts them according to how fast they travel through an electrical field in a tube.[111] This identifies compounds found in explosives. Deploying these machines and officers require specialized training to ensure the operation is conducted properly.

There can be no discussion of explosive detection patrol deployment without mentioning the use of K-9 patrols. They are truly remarkable and have considerable merits as well as some drawbacks. A dog's ability to detect explosive material is truly remarkable. The sensitivity of a dog's nose is superior to most field portable detection devices. Equally important, the canine nose is able to spatially locate explosive material, allowing the rapid search of a large area. In addition, canines are able to distinguish the presence of explosives in complex environments, such as a subway or train station. The disadvantages of using dogs are the extensive training requirements and their inability to work for extended periods. Currently, New York City, as well as some other public

[111] Sergeant Arthur Mogil, NYPD Counterterrorism Division Explosives Expert, author interview, January 2, 2008.

transportation systems, has canine detection programs in operation.[112] Using K-9 dogs for explosive detection in a transit environment is a decision that requires a long-term commitment and may only be possible for the larger municipalities.

Effective deployment is not an absolute solution to the problem of terrorism. There are not enough officers on subway and train patrol to be in every train car or on every platform. By having these deployments based upon an intelligence assessment of the current condition, they can be very effective. Terrorism experts have stated:

> Unlike an airport or an office building, public transit systems cannot simply be closed off or tightly controlled without compromising their fundamental character. However, just because an absolute envelope of security may not be possible, that should not be an excuse to do nothing.[113]

Additionally, David Cohen, the NYPD's Deputy Commissioner for Intelligence, has said, "Unpredictability is the enemy of terrorists," and, when discussing transit security, "More is better than some; some is better than none; and none helps the terrorists."[114]

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[112] Steven G. Haupt, Shahed Rowshan, and William C. Sauntry, "Applicability of Portable Explosive Detection Devices in Transit Environments," Transit Cooperative Research Program: *Public Transportation Security* 6, Washington, D.C., 2004, 10. http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp_rpt_86v6.pdf. [accessed February 21, 2008].

[113] Sahm, *Hard Won Lessons*, 6.

[114] *McWade v. Kelly*, Decision and order by Judge Richard Berman, U.S. District Court, Southern District of New York, December 2, 2005.

V. RELENTLESS FOLLOW-UP

If the Compstat techniques of fighting crime are to be applied to combating terrorism, an examination of how criminals are apprehended is required. Whereas the police attempt to prevent crime by intelligently deploying their resources to areas of concern, serious and terrible crimes still occur. When these crimes do occur, an intense investigation takes place. Resources are dedicated until the perpetrators of the crime are apprehended — before they commit another similar crime. One such recent crime occurred on April 13, 2007, when a Columbia graduate student was accosted in her hallway and forced into her apartment. She was raped and brutalized for nineteen hours before the perpetrators tied her up and set the apartment on fire. She managed to survive the attack, but the perpetrator escaped. By scouring the neighborhood for witnesses, searching all video cameras in the neighborhood and checking past criminal records, a suspect was identified. When the perpetrator was arrested for a different crime, his name and description identified him as a suspect in the rape. The relentless follow-up lead to the suspect being arrested for the brutal rape seven days after it occurred.[115]

The same holds true for terrorism incidents. Once an incident has occurred or a suspected plot has been uncovered, the follow-up investigation is critical to apprehending those responsible in order to prevent future attacks. Two examples support this frame of reasoning.

1. The Assassination of Meir Kahane

Meir Kahane was the founder of the radical Jewish Defense League and advocated the expulsion of all Arabs from Israel and the occupied territories. He was so radical that Israel's parliament banned Kahane's political party. At the end of an anti-Arab speech at a New York hotel on November 5, 1990, El Sayyid Nosair, a 36-year-old Egyptian immigrant, walked up to Kahane, pulled out a gun and fatally shot him.[116] He

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[115] Associated Press, "Man Arrested in Grad Student's 19 Hour Torture," MSNBC website, http://www.msnbc.msn.com/id/18204409/ [accessed March 5, 2008].

[116] Peter Patton, "The Assassination of Meir Kahane," *Terrorist Modus Operandi, A Compendium of Reports on New York Terrorist Incidents* 2, no. 1, May 2006, 1.

was quickly apprehended by NYPD officers. It has been reported that when the police searched Nosair's residence, they carried off forty-seven boxes of documents, paramilitary manuals, maps, and diagrams of buildings, including the World Trade Center.[117]

Senior NYPD counterterrorism analysts have written:

> The assassination of Meir Kahane was the first act of radical Islamic terrorism on the U.S. homeland. The political climate in New York at the time may have swayed political and police authorities to dismiss it as an act of a lone gunman, putting emphasis on closing cases. This would prove deadly as later events such as the 1993 World Trade Center attack, and the 1993 landmarks plot would tie directly to El Sayyid Nosair and those involved with him.[118]

This incident was initially viewed as the act of a lone person, but an experienced counterterrorism analyst has concluded, "armed with the power of hindsight, it is now clear that the murder was part of a larger conspiracy."[119]

The lack of follow up in this incident allowed additional plots to go unnoticed. The documents recovered from Nosair's residence were never translated from Arabic because there was no sense of urgency in the follow-up investigation. It has been reported that the documents recovered were not properly handled: "The FBI had taken possession. Three years later, the bureau discovered that Nosair's documents, which it had never translated, anticipated the trade center attack." [120]

2. Explosives on the London Underground

Alternatively, a positive incident of relentless follow-up is the incident on the London Underground on July 21, 2005. Four potential suicide bombers attempted to

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[117] James Bovard, "FBI Blunders and the First World Trade Center Bombing," *Freedom Daily*, August 2004 https://www.hsdl.org/homesec/docs/nonprof/nps22-101405-12.pdf&code=f22ee030c979e98b2e060513a5212b87 [accessed January 16, 2008].

[118] Patton, "The Assassination of Meir Kahane," 1.

[119] Ibid., 7.

[120] MacDonald, "Keeping New York Safe from Terrorists."

detonate their explosives on crowded trains but only ignited their detonators and not the full payload of explosives.[121] The follow-up investigation led to their quick arrests.

The local media reported on July 29, 2005:

> The arrests mean all four men captured on closed-circuit television and suspected in the bombing plot are now in custody: Muktar Said Ibrahim, Yasin Hassan Omar , Osman Hussain and a third unnamed man. Scotland Yard calls it their "best day yet."[122]

It is quite clear that incredibly swift arrest of these potential suicide bombers prevented another attack. If they were so dedicated to their cause of Islamic fundamentalism that they were willing to die, it stands to reason that these men would have tried another attack.

During police investigations, relentless follow-up is necessary to apprehend criminals and to prevent these same criminals from perpetrating future crimes. The same holds true for terrorism-related investigations; relentless and thorough follow-up is necessary to apprehend terrorists and to prevent them from committing further acts of terror.

Because the very nature of terrorism is so asymmetrical, preventing all terrorist attacks is not realistic in the open and free society of the United States, especially when it comes to the nation's train and subway systems. Future attacks may be mitigated, however, by relentlessly pursuing those terrorists and their associates when acts are perpetrated.

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[121] Glenn Frankel, "London Hit Again With Explosions," *Washington Post*, July 22, 2007, http://www.washingtonpost.com/wp-dyn/content/article/2005/07/21/AR2005072100474.html [accessed February 19, 2008].

[122] Canadian Broadcast News website, http://www.cbc.ca/news/background/london_bombing/investigation_timeline.html [accessed January 2, 2008].

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VI. RECOVERY

Due to the unpredictable nature of terrorism and the open nature of train systems, a determined terrorist can successfully attack a train system, even with all of the aforementioned layers of protection,. Given this fact and the fact that the current trend in transportation system attacks appears to be multiple, nearly simultaneous, conventional explosions, any adequate strategy to protect a train system from a terror attack needs to include a comprehensive evacuation plan.

This evacuation is designed to lessen the impact of an attack and aid in the recovery. For example, terrorists have very successfully targeted mass transportation systems around the world. They bombed Madrid, London and Mumbai, as well as others. These attacks all incorporated multiple explosives devices that were detonated at different times. The terrorists' plan is to execute a "spectacular" attack and cause as many casualties as possible. Transportation counterterrorism experts have said:

> For terrorist organizations seeking to produce mass-casualty attacks, such a 'target-rich environment' makes rail systems particularly attractive.[123]

Whereas it is unclear whether the previous programs would have prevented all or some of the previous attacks, preventing all attacks is not definite due to the fluid nature of train systems and their vast system of tracks and stations. To save lives and lessen the impact of a terrorist attack, a quick evacuation of the entire transportation system is necessary in the event that a single or initial explosion or incident has occurred.

Research has shown that the current New York City subway evacuation plan calls for a complete evacuation of the entire subway system in the event of a single explosion. It relies, however, on the civilian employees of the Metropolitan Transportation Authority (MTA), the train conductors, to pull the train into the next stop and self-evacuate all passengers without utilizing emergency responders.[124] A review of this

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[123] Wilson et al., "Securing America's Passenger-Rail Systems," 2.

[124] Metropolitan Transportation Authority Response to Rapid Transit Emergencies. P/I 10.32.3, Addendum, July 22, 2005.

current plan reveals that it does not utilize the New York City Police Department, Fire Department or other emergency workers to assist in the evacuation in a pre-planned systematic manner.[125]

The current evacuation plan has some serious deficiencies. To begin with, the time between the first incident, or a confirmed explosion, and when the evacuation order is given is unable to be accurately calculated. This is because it is difficult to judge when the MTA will be notified and when they will be able to give the evacuation order.

For example, on September 11, 2001, the MTA did not shut down the Transit System until 10:20 a.m., one hour and thirty-four minutes from when the first plane struck the North Tower. [126] Conversely, there is a track record of extremely quick notification and response within the NYPD. According to the McKinsey Report on the NYPD response to 9/11, it only took one minute from the time the first plane struck the North Tower of the World Trade Center until a Level 3 mobilization was called over NYPD communications system.[127]

The NYC Office of Emergency Management full-scale exercise, conducted on August 26, 2007, revealed that all of first responders — whether police officers, firefighters or emergency medical technicians — responded directly to the affected area. This may be proper in the case of an accident, but in the age of terrorism, this is a serious flaw. The exercise involved a secondary device that was discovered during the exercise and was rendered safe before detonation. This exercise was under controlled exercise conditions and does not adequately reflect the research of past major attacks.

During the exercise, the NYPD notified the Rail Control Center to implement an "emergency shutdown," but the MTA representative thought they were asking for a

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[125] Wilson et al., "Securing America's Passenger-Rail Systems," 2.

[126] "Improving NYPD Emergency Preparedness and Response," McKinsey and Company, August 19, 2002, 51.

[127] Ibid., 48 (A Level 3 Mobilization entails ordering patrol officers from each precinct in the patrol borough as well as all task force officers within NYC to respond, which equals approximately 350 officers)

"power removal," which is a distinctly different operation. The NYPD representative was calling for an evacuation; instead he received a disconnection of the electrical power to the effected area.[128]

This exercise gave significant merit to the author's assertion that the current NYC subway system evacuation plan needs to be re-evaluated. The lack of understanding between the parties and the subsequent delay may have led to serious consequences, especially if this had been an actual attack with near simultaneous explosive devices, which experts predict is a likely scenario.

The exercise also revealed a need for more awareness of a secondary attack from arriving pedestrians. A perimeter around Penn Station was not established until fifteen minutes after arrival of the first officers. Even then, the perimeter was not adequately hardened and pedestrians were able to access areas that were within the security perimeter.[129]

Due to the nature of terrorist attacks, any comprehensive evacuation plan has to include the local or municipal emergency agencies to proactively assist in the evacuation. Each municipality should have a comprehensive evacuation plan that includes that city's, state's or town's emergency personnel to assist in the evacuation. Police officers, firefighters, and emergency medical technicians should all be part of a comprehensive evacuation plan that places a priority on quickly evacuating personnel from all trains in the system.

The history of attacks has shown that several devices are usually placed inside the trains. Once the initial explosion has occurred, more explosions often follow. To lessen the impact of such an attack, passengers should be quickly evacuated. Since nobody can be sure which trains have explosive devices and which do not, all trains should be evacuated quickly.

The emergency personnel can assist in the evacuation by reporting to predetermined locations, such as train stations, to help the transit employees safely

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[128] Penn Station Full Scale Exercise After Action Report, 2007, 22.

[129] Sergeant Patrick O'Neill, author interview August 27, 2007.

evacuate the passengers. The police officers on patrol, the firefighters on the fire truck and the emergency medical services technicians on their ambulance can all respond to pre-designated locations in their area of responsibility. This of course would be superseded by the need for assistance from the initial blast site, but in large cities, such as New York, miles can separate train locations from one another. Those emergency workers not near the initial incident site would be better served by quickly evacuating passengers from a train or bus that may be armed with an explosive device.

Once the entire system has been evacuated, properly trained explosive experts can mitigate any remaining devices. This quick evacuation is sure to save lives and to instill confidence in the passengers that their municipality is taking every effort to protect them from the terrorists.

A proper evacuation is an important part of this strategy. Prevention involves not only completely interrupting a terrorist plot, but also preventing "terrorists from achieving the goals their attacks are meant to accomplish."[130] By limiting the effectiveness of an attack through a successful evacuation, the enormous amount of fear that the terrorists wish to create, would be significantly reduced.

[130] Christopher Bellavita, "What is Preventing Homeland Security," *Homeland Security Affairs* 1, no. 1, Summer 2005.

VII. STRATEGIC CONCLUSIONS

It is quite obvious from the research that the United States is faced with the fact that international terrorists want to launch more attacks in the United States. The terrorists are prone to attacking the mass transit system, since that tactic has worked very successfully on other transportation systems around the world.

Protecting the subway and train systems in the United States is an incredibly difficult task. This is evident by statements from transportation security experts:

> Protecting the vast transit network of the United States will clearly not be an easy task.[131]

Even Homeland Security Secretary Michael Chertoff has acknowledged that the federal government is relying heavily on "state and locals" to do the job.[132]

This thesis has provided a realistic Compstat counterterrorism strategy for local police departments to follow in an effort to prevent a devastating attack on a train or subway system in the United States. No city or state agency can have a fully risk-free mass transit system and remain functional, due to the open and fluid nature of these systems.

It is incumbent upon the United States to stop taking the approach that we are fighting a "war" on terrorism domestically and that we can prevent every single terrorist attack. That is simply not the case. The purported "war" on crime certainly did not prevent every single incident of criminal activity from taking place. What can be done is to take a realistic, proven, crime-fighting approach to the threat of a terrorist attack, specifically against the train and subway systems. This crime-fighting strategic approach is appropriate because terrorists are, after all, criminals.[133] The fact that terrorism is a

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[131] Sahm, *Hard Won Lessons: Transit Security*, 18.

[132] Ibid.

[133] Kathleen Kiernan, "Tradecraft or Streetcraft?" *Crime and Justice International* 22, no. 93, July/August 2006, 29.

crime makes it susceptible to a crime prevention strategy.[134] Under this premise, proper utilization of local police resources and adaptation of proven law enforcement techniques can reduce the threat of terrorism.

In addition to this preventative strategy, a comprehensive and quick evacuation plan has proven to be necessary by examining the deficiencies of the current evacuation plan, made evident in the full-scale exercise conducted. By taking this approach, the author believes the threat and consequences of an attack can be reduced to an acceptable level, one that the passengers of America's trains and subways can tolerate as they tolerate the threat of crime.

Research has shown that the CompStat process has been successful in reducing crime to record low numbers in New York. Cities from all over the country have copied the NYPD's crime-fighting approach. This has led to dramatic decreases in crime in cities all over the country.

Research has also shown that since there is a strong crime–terrorism nexus, the components of a successful CompStat strategy directly apply to a counterterrorism strategy.

The hypothesis put forth in this thesis is that a new strategy can reduce the threat of a terrorist attack on the train and subway systems of America. The proposed strategy is devised from combing current NYPD CompStat and counterterrorism programs. Another concept in this thesis is that the new CompStat counterterrorism strategy could be replicated across the country, similar to the spread of the crime fighting CompStat strategy. In support of the apparent success of the NYPD's counterterrorism initiatives, homeland security experts have said that the NYPD, under the leadership of Commissioner Raymond Kelly, has created the least friendly environment for terrorists in

[134] Jean F. O'Neil, "Crime Prevention can Spur and Support Homeland Security in Neighborhoods and Communities," Topics in Crime Prevention, National Crime Prevention Council, Winter 2006, 1. http://www.ncpc.org/cms/cms-upload/ncpc/File/topics_cp_hs.pdf [accessed February 21, 2008].

the country.[135] These same homeland security experts agree with this research, in that it would be beneficial to apply a CompStat strategy to combating terrorism:

> Most vitally, the theory of order maintenance commonly called "broken windows," which police in New York City have used so successfully in the war on crime, can be adapted for the war on terror.[136]

Not only experts have made this assertion. Heather MacDonald, of the Manhattan Institute, has written that Compstat is "tailor-made for combating terrorism." [137] She further states:

> The FBI's anti-terrorism efforts should be Compstated in every city where the bureau operates.[138]

The Director of the Homeland Security Management Institute at Long Island University also agrees that CompStat could apply to combating terrorism:

> The same strengths that make Compstat work to reduce crime or to manage an entire city can easily be brought to bear on the threat of terrorism, with the same potential for success.[139]

While all of the aspects of this theory are yet to be realized, a major point of this thesis has been validated. The speculation that other major train systems will copy a successful NYPD strategy has been confirmed. The nation's most extensive railroad has started to copy the NYPD's Subway Counterterrorism programs. Amtrak announced on February 18, 2008, that it will implement security changes:

> Amtrak will start randomly screening passengers' carry-on bags this week in a new security push that includes officers with automatic weapons and bomb-sniffing dogs patrolling platforms and trains.[140]

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[135] George L. Kelling and William J. Bratton, "Policing Terrorism," *Civic Bulletin*, No. 43, September 2006, http://www.manhattan-institute.org/cgi-bin/apMI/print.cgi [accessed February 19, 2008.

[136] Kelling and Bratton, "Policing Terrorism."

[137] MacDonald, "Keeping New York Safe for Terrorists."

[138] Ibid.

[139] Vincent Henry, "Managing Crime and Quality of Life Using COMPSTAT: Specific Issues in Implementation and Practice," 130. http://www.unafei.or.jp/english/pdf/PDF_rms/no68/08_Dr.%20Henry-2_p117-132.pdf [accessed March 5, 2008].

[140] Associated Press, "Amtrak to unveil new security measures including random bag screening," *International Herald Tribune*, February 18, 2008 http://www.iht.com/bin/printfriendly.php?id=10163174 [accessed February 18, 2008].

Amtrak's vice president for security strategy and special operations, Bill Rooney, admitted that the new procedures draw heavily on measures being used in the New York City subways.[141]

Implementation of the Counterterrorism CompStat strategy is worth the effort if it can deter or even alter the plans of the terrorists. That alone will lessen the attack, and because the stakes are so high, lives will be saved. Transportation Security experts agree that:

> Even if security measures prevent only the largest-scale attacks, they could significantly reduce the human costs associated with this threat. Given recent large-scale attacks on rail systems in Madrid, London, and Mumbai, coupled with the desire of contemporary terrorist groups, such as al Qaeda, to produce mass-casualty events, the importance of preventing these macroterrorist events takes on added magnitude.[142]

The strategic importance of this CompStat approach to combating the threat of terrorism in the train and subway systems across the nation is that it can reduce the greatest weapon of the terrorists: fear. Local law enforcement was able to garner the knowledge and skill to reduce the fear of crime when it was skyrocketing across the country. They now have the same ability to reduce, to a similar level, the fear associated with domestic terrorism.

The strategy also prevents a paralyzing economic response to the constant threat of an attack. By providing a realistic strategic vision on how to properly combat terrorism, using proven law enforcement techniques, excessive expenditures of economic resources can be prevented. Unrealistic and costly ideas — such as searching every person and bag before it enters the train and subway systems, and retrofitting every train car to be more blast resilient — can be avoided. When crime was rising and perceived to be out of control, the NYPD and other police departments did not spend billions of

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[141] Associated Press, "Amtrak to unveil new security measures."

[142] Wilson et al., "Securing America's Passenger-Rail Systems."

dollars to place a police officer or video camera on every corner. Instead, they relied on a CompStat strategy to reduce crime. It worked, and now we must apply a similar strategy to combat terrorism.

Another important concept in this thesis is the assurance that law enforcement is up to the task. Local law enforcement reduced crime across the United States, and can do the same to the threat of terrorism. This strategy would use the same resources that reduced crime across the country and would provide a realistic and sustainable approach to redirect these resources to combat the threat of terrorism. Just as the crime-fighting CompStat system has proven malleable enough to apply to both large metropolitan cities and small towns, the CompStat counterterrorism approach is applicable to all of the train and subway systems across the country.

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